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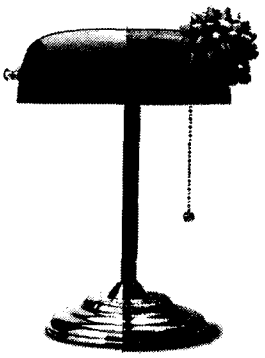

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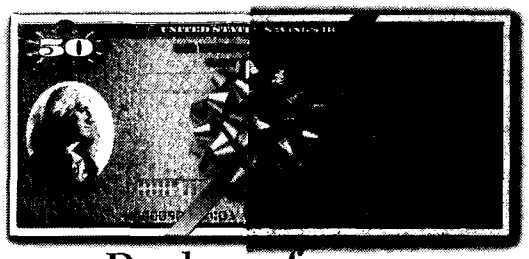

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EDITORIAL

This issue of the *Quarterly Journal of Austrian Economics* is dedicated to Dr. Hans F. Sennholz in honor of his 80th birthday. Dr. Sennholz received a Ph.D. in economics from New York University in 1955, where he studied and wrote his dissertation under Ludwig von Mises. Also, for years, he attended Mises's famous NYU seminar. Along with Mises, he was one of the very few Austrian monetary economists to survive the postwar tidal wave of Keynesian macroeconomics that swept over American academia and submerged sound monetary economics. He wrote prolifically and insightfully on topics that spanned the breadth of economic theory and policy, and his oeuvre comprised 16 books and monographs, 36 German-language articles, and over 500 English-language articles. His writings on monetary and business cycle theory and policy during the economically tumultuous 1970s and afterward were instrumental in promoting the renaissance of Austrian economics that had been initiated by Murray Rothbard in the early 1960s. In addition his teaching at Grove City College in Pennsylvania, where he served as the chairman of the economics department from 1956 until his retirement in 1992, achieved world-wide renown and familiarized many students with the bedrock principles of Misesian economics.

Some of Dr. Sennholz's students were so inspired by his teaching that they continued on to receive their Ph.D.'s and have since taken their place as leading researchers and teachers in the contemporary Austrian movement. We are gratified to number three of his former students among the contributors to this issue: Peter J. Boettke, Sanford Ikeda, and Philippe Nataf. Regardless of whether they have had the advantage of Dr. Sennholz's personal instruction and guidance, however, all the contributors to this issue, including the editors, and most Austrian economists working today have benefited enormously from Dr. Sennholz's publications as well as the example he has set as a tireless researcher and teacher in the quest to discover and disseminate economic truth.

After his retirement from Gróve City College, Dr. Sennholz assumed the position of president of the Foundation for Economic Education, which he held from 1992 to 1997. At an age when most former academics would have chosen a quiet life of reflection to pursue their hobbies or write their memoirs, he accepted the formidable challenge of rescuing and rejuvenating this venerable institution that had been so successful in educating people of all ages and in all walks of life in the basic principles of economic science. There could not have been a more perfect match between man and mission.

An overview of Dr. Sennholz's career and work can be found in the following works: *A Man of Principle: Essays in Honor of Hans F. Sennholz*, John W. Robbins and Mark Spangler (Grover City, Penn.: Grove City College Press, 1992); *Reflection and Remembrance*, Hans F. Sennholz (Irvington-on-Hudson, N.Y.: FEE, 1997); and "Misesian for Life: An Interview with Hans F. Sennholz," *Austrian Economics Newsletter* (Spring 2002).

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After the Age of Inflation: Austrian Proposals for Monetary Reform

Jeffrey M. Herbener

If economic events of the last 30 years imply anything, it is the urgent need for monetary reform. The international monetary system, degrading since the classic gold standard of the nineteenth century, which itself was less than ideal, reached its nadir with the collapse of the Bretton-Woods regime in the late 1960s. When President Nixon closed the gold window in 1971, he hastened the world down the path of monetary disintegration. "Freely" fluctuating currencies not only failed to establish international economic prosperity on a firm foundation, but aggravated instability by unfettering the forces of monetary inflation. Unbound by reserve drains and periodic devaluations caused by excessive monetary inflation under Bretton-Woods, central banks began a world-wide monetary inflation unprecedented in peacetime.

Whatever hopes were raised that all this would change with the reconstruction of an international dollar-reserve system in the 1980s, they were dashed when the world's new monetary order failed to halt the retrogression and seems, in fact, to have given the world more, not less, instability. The Japanese attempt to reestablish its pre-Second World War regional dominance in East Asia by instigating a yen-based economic boom in the second half of the 1980s came up short after the collapse of the American stock market and consequent reversal of the American weak-dollar policy. The subsequent strong-dollar policy concentrated on encouraging a steady build up of foreign dollar holdings. Unable to compete with the dollar as a reserve currency in East Asia, the yen collapsed under the weight of the previous yen inflation. Higher Japanese interest rates and the recognition that the 1980s credit expansion had fostered serious malinvestments in the Japanese economy led to its awesome stock market crash. By preventing liquidation of the malinvestments of the boom, especially in the banking sector itself, the Japanese government has generated an economic stagnation in Japan now well into its second decade. Spurred on by the energetic absorption of dollars in East Asia, Mexico, South America, Eastern and Central Europe, and Russia throughout the 1990s, the Federal Reserve inflated the

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dollar stock at accelerated rates. The resulting malinvestments of the credit-expansion boom occurred outside America in the first half of the 1990s. Adding to the problems of those countries that had pegged their currencies to the dollar in the new dollar reserve system was the inflation of their domestic currencies in excess of the build up of their dollar reserves. The pegs broke, first in Mexico, then in Russia, Southeast Asia, Eastern and Central Europe, and South America. Along with currency debacles in these counties came the concomitant domestic price inflation, rising interest rates, collapsing financial markets, and economic liquidation. Having ravaged that part of the world economy outside the U.S. on the dollar-reserve standard, the Federal Reserve dollar inflation hit home in the latter half of the 1990s. Domestic credit expansion began in earnest in 1995 and built to a crescendo in 2000. Since then the Dow Jones Industrial Average has fallen nearly 40 percent and the NASDAQ by nearly 80 percent. The liquidation is well underway with no end in sight. Certainly it is no exaggeration to say that recent events have demonstrated the bankruptcy of the international monetary system.

Given this state of affairs, one of the most valuable tasks economists can perform today is to advance proposals for monetary reform. Hans Sennholz, then, must be considered preeminent, having devoted the better part of his long and distinguished academic career to post-Second World War monetary reform. From his earliest writings on the subject, in 1955, Sennholz realized its importance. He wrote:

> The return to sound money policies is of utmost importance. Without sound money there can be no economic recovery, no prosperity, no economic cooperation, no international division of labor, no unification. Sound money is the cornerstone of individual liberty. Sound money is metallic money. It is the gold standard. (Sennholz 1955, p. 296)

More than merely understanding the importance of monetary reform to the world, Sennholz clearly grasped what the goal of reform must be.

Austrian Monetary Theory

Sennholz could reach this apogee because he eagerly embraced the Menger (1976)-Mises (1980) theory of money. Concerning monetary reform, their key insight is that money is organic to the market economy. It is part and parcel of the private property, voluntary exchange order. State intervention, therefore, is unnecessary for money to originate, develop, and reach its most advanced state. A medium of exchange must have originated as a widely traded commodity exchanged on a well-developed barter market. Only under such conditions would indirect exchange prove beneficial to traders in facilitating their trades by increasing the instances of reverse preferences among them. Money can never originate by state fiat because a new fiat money is not a traded item, hence: it cannot serve as a medium of exchange. All the state can do by fiat is ratify an existing medium of exchange as money. Moreover, because it is not being traded, a newly issued fiat money lacks exchange value, by which traders can use arithmetic computation to determine how much of it to give and accept in exchange for goods and factors. For something that is not being traded on the market to become a medium of exchange, it must be introduced as a money substitute, i.e., as a legal claim to money that is redeemable for money at par on demand. As a substitute for money, it assumes the medium of exchange function and the exchange value of money itself. On the exact nature of the legal claim by which something becomes a money substitute, Austrian scholars disagree and their disagreement gives rise to different proposals for monetary reform which will be examined below. What they do agree on is that the private issuer of a money substitute cannot legally rescind redemption permanently and thereby transform the money

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substitute into money itself. Only the state can violate private property with impunity and thereby transform a money substitute into fiat money by abrogating its redemption claim permanently.

Over time, traders give up commodities less suited to perform the medium of exchange function for those better suited for this task. The superior durability, divisibility, portability, and relative stability of the exchange value of gold and silver give incentive for traders to adopt them as money to the exclusion of other commodities. A monometallic standard is unlikely, without state intervention to demonetize either gold or silver, because of the differing exchange value between gold coins and silver coins. Gold's high value to weight ratio makes it impractical to mint gold coins small enough to use for low-priced items. Instead traders would use gold coins for higher-priced items and silver coins for lower-priced ones. The production of coins would be regulated by profit and loss on the market just as the production of any good is so regulated. If demand for gold and silver coins increased enough to raise their purchasing power above the costs of their production, then minting companies would produce more. Their added production would push the exchange value of money down, their added demand for the factors of production would push factor prices up, and their added capital investment would push rates of return down until the greater profitability of expanding operations no longer persisted. Money substitutes would be demanded by traders seeking a medium of exchange having greater convenience and safety than coins. To the extent that they were willing to pay fees high enough to cover the costs of producing the money substitutes, banks would provide them. Because the cost of providing money substitutes would be nearly the same regardless of their denominated value, only the demand for larger denominations would likely be satisfied. But if demand were great enough for small denomination money substitutes so that they displaced silver coins, then a gold standard could emerge as the monetary regime freely chosen by traders in the market. In short, the monetary system of the market economy, one in which money and money substitutes are part and parcel of the market itself, would be a commodity standard, either gold coins or gold and silver coins as money and perfectly redeemable money substitutes.

Within this basic framework, Austrian authors differ on two points.[1] One is the identity of the money producer. Some rest content with having the state produce money, while others argue that only production by private enterprise is consistent with the market economy. Hayek (1976, pp. 42-46, and 99-101) would permit the state to continue issuing fiat paper money denominated in dollars in competition with private producers of fiat paper money denominated in their own, freely chosen, units such as "ducats." Some of the modern free-banking school would also retain state issued fiat paper money, as long as its stock was kept constant and used almost exclusively for bank reserves (Selgin 1988, pp. 167-68; White 1989, p. 14).[2] Like Hayek, Sennholz (1985, pp. 77-83) advocates competition in money production, but with private enterprises providing gold coins and the state issuing fiat paper money, and counsels moving directly to a competitive market by rescinding legal tender laws and other legal obstacles to private money production. Ludwig von Mises would go further in purging the state from the monetary regime. He would merely permit it to operate a "conversion agency" that would mint privately produced gold and silver into coin and convert its redeemable paper money substitutes into coin on demand at par

[1]Save Hayek, all of the Austrian economists surveyed accept the basic framework established by Menger. See Mises (1980, pp. 41-49); Rothbard (1983, pp. 8-13); Sennholz (1992, pp. 19-34); and White and Selgin (1989, pp. 218-21).

[2]Selgin (1988, p. 171) contends that money proper need not be government issued fiat paper, but could be gold or fiat paper produced by private enterprise. White (1989, pp. 161-63) asserts that almost anything could be used as money proper.

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(Mises 1980, pp. 487-88 and 492-94). Only Murray Rothbard insists on the goal of complete private enterprise production. His ideal is a pure gold standard. He would do so through the intermediate steps of restoring the redemption of the dollar into gold and dissolving the Federal Reserve System. Having privatized the state's gold stock, private enterprise would then mint coins and issue money certificates (Rothbard 1994, pp. 146-51).

The second point on which these authors have differing views is the nature of money substitutes. The modern free-banking school claims that the issue of money substitutes, whether money certificates or fiduciary media, is an exercise of the right of freedom of contract and that this right extends to the issue of money substitutes for which the obligation of redemption can be temporarily rescinded by the insertion of an "option clause" into the contract for the money substitute (Selgin 1988, pp. 31-32, 137, and 161-62; White 1989, pp. 157, 235-36, and 246). Mises and Sennholz take the position that issuers do not have the legal right to issue fiduciary media, *per se*, but only perfectly redeemable money substitutes.[3] To be a medium of exchange, any money substitute, whether money certificate or fiduciary media, must be redeemable for money on demand at par. As Sennholz wrote:

> The issuers of money substitutes, whether private or public, keep their currencies at par with gold through unconditional redemption. A note-issuing bank buys any amount of gold against its currency or deposits at the parity rate, and sells indiscriminately and on demand any amount of gold against its notes and deposits. It thereby renders no national service, nor "defends" nor "protects" its currency. It merely fulfills the contract it made when it issued the money substitute. (1985, p. 69)

Moreover, Sennholz claims, as do the free bankers, that banks have a natural limit to the issue of fiduciary media. "Redemption demands and the threat of drains of their gold reserves," he wrote, "would restrain the issuers of money substitutes from inflationary expansion" (Sennholz 1985, pp. 69-70).[4] In contrast Mises thought that a free banking system could inflate fiduciary media without limit. "The quantity of fiduciary media in circulation," he wrote, "has no natural limits," being constrained only by a policy adopted to do so by the banking system. By issuing fiduciary media through the credit markets, a free banking system can lower interest rates and the purchasing power of money and hence, increase the demand for both credit and money. Consequently, Mises did not think that there was any limit to the issue of fiduciary media in a free banking system or that such a system automatically adjusted the issue of fiduciary media to changes in money demand. These results could only occur in a competitive, free banking system, one in which each bank is independent of the others, having a small and limited clientele and unable to coordinate its issue of fiduciary media with that of other banks. Although competitive, independent banks would have a limit to their issue of fiduciary media, Mises (1980, pp. 331-53) argued free banks could operate as a cartel and therefore, inflate their fiduciary media without limit.[5]

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[3]On his view, see Mises (1980, pp. 65-66).

[4]The free bankers argue that banks expand their stock of fiduciary media to accommodate rising money demand, but will not issue fiduciary media beyond the amount demanded. See Selgin (1988, pp. 89-125) and White (1989, pp. 218-42). Hayek (1976, pp. 46-55) does not think it useful to distinguish between money and money substitutes; but, like the free bankers, he claims that competition to provide a currency of stable or predictably changing value would require banks to limit their issue of currencies.

[5]White himself argues that the natural development of a free banking system results in cartelizing arrangements that extend the clientele of each bank to all traders in the market and

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Apparently, Mises (1980, pp. 346-47 and 491) became convinced that competitive banking conditions were theoretically unlikely or could not be reestablished in the post-Second World War American economy, because he offered a program of monetary reform, which he designed to prevent the possibility of monetary inflation, that would legally restrict any further issue of money substitutes to money certificates. Rothbard, in contrast, consistently argued that only money certificates are consistent with private property. Fiduciary media was, in his view, fraudulent and therefore, impermissible in the market economy (Rothbard 1994, pp. 33-45).

The Goal of Monetary Reform

Although all of the Austrian authors surveyed agree that reform should restore the market monetary regime, their differences concerning who can produce money and the character of money substitutes on the market generate different end states for monetary reform to attain. In addition to these variations, the differing views held by the authors on the nature of private property affect their reform proposals. Hayek (1973) treats private property in an exclusively instrumental way. Its adoption by market societies permitted them to flourish sufficiently to out compete nonmarket societies in mankind's evolutionary development. But private property itself is solely a human device that serves this end. Mises also considers private property a means to a valuable end, namely, that of constructing, maintaining, and developing the division of labor, which, in turn, is necessary for the flourishing of mankind. Although he considers the legal code of private property as having instrumental value, Mises holds that private property itself is grounded in human nature, i.e., the human person engaged in human action. Moreover, in contrast to Hayek, he views private property rights and the market, not as a spontaneous development, but as the product of man's reason and, therefore, subject to "constructivist" improvement via rational investigation (Mises 1998, pp. 32-41, 199, 264-70, 650-53, 755-56; 1985, pp. 18-20, 33-34, 60-70).[6] For Rothbard and Sennholz, private property is both a means and an end. It is part of natural law or moral law and therefore, a matter of justice. Private property not only restores the market economy and its economizing operation, but human rights as well. As Sennholz put it:

> The history of Western society is a long register of the struggle between the individual longing to be free and the political lord insisting on sovereignty and order. The struggle over money must be seen as an integral part of this fateful confrontation. Where people seek liberty, self-determination and self-government, they seek to regain their freedom of money or, at least, to force government to be honest in monetary matters. (Sennholz 1985, p. 61)

For Rothbard and Sennholz, to restore the market means to defend private property from aggression. For both authors, private property is part of the natural order and the foundation of the market economy and defending it is part of justice or right. Rothbard (1999), however, links all private property to the human person himself, who has rights to his mind and body, the things he creates with his labor, and acquires from others by voluntary transfer and exchange. In contrast, Sennholz emphasizes production in the market as the source of property. He wrote:

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hence, renders a system in which, Mises would claim, the issue of fiduciary media has no limit. See White (1989, pp. 225-38).

[6]For Hayek on "constructivism" see, Hayek 1973 (pp. 1-34).

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> Throughout the history of man, private property has resulted from acquisition of ownerless things, from violent expropriation of previous owners, or from production by human skill and energy. . . . [But] in an exchange economy . . . private ownership of the means of production is a fundamental institution. It springs from production and comes into existence peacefully. . . . [P]rivate ownership means full control over the uses and services of property, not merely a legal title while government is holding the power of control. . . . Private property is no special privilege enjoyed by the owner class. It is a natural institution that facilitates orderly production and division of labor. (Sennholz 1982, pp. 1-3)

Moreover, Rothbard grounds his ethical claims about private property in the natural law tradition of the late scholastics, Hugo Grotius, and John Locke, while Sennholz rests his claims on the scripture. Sennholz wrote:

> The market order or capitalism finds its answers [to ethical questions] in the Judeo-Christian code of morality. Private ownership in production is squarely based on the ten commandments. It obviously rests on the eighth commandment: "Thou shalt not steal." . . . The private ownership system also builds on the solid foundation of the sixth commandment: "Thou shalt not kill," which includes every form of coercion and violence. . . . To freely exchange goods and services, the contract parties must not deceive each other. They "must not bear false witness," which is the ninth commandment of the Decalogue. (Sennholz 1990, pp. 1-2)

As part of the natural law tradition, Rothbard argues that private property stems from a person's natural ownership of himself and the things he acquires with his labor out of nature and then to things he produces by the application of his labor. By starting with the individual person, the things he acquires from nature, and that which he produces with his own labor, Rothbard is able to maintain the truth that there can be only one legitimate owner of something, even when he moves on to analyzing the division of labor economy in which goods are produced by groups of persons, none of which owns the output naturally from the application of his labor. Although more difficult to perceive, even in this case each thing is legitimately owned only by one person. The entrepreneur owns the output, the workers own their money wages, and so on. Keeping this point in mind, Rothbard renders a stricter defense of private property in the realm of money than that of the other authors. In particular, as mentioned above, Rothbard claims that fiduciary media is a fraudulent title of ownership to money as property because there can be only one legitimate title of ownership to each item of money and therefore, that only money certificates are consistent with private property.[7] By stressing the right of contract, Sennholz and the free bankers gloss over the acquisition of property and ignore Rothbard's point about property titles. As mentioned above, Sennholz (and also Mises) claims that in a market economy banks have the right to issue money substitutes that are redeemable on demand at par, while the free bankers think that this right extends even to money substitutes which have "option clauses" stating that they are not always redeemable on demand at par. If anything, Hayek places even greater stress on the right of contract, for by it entrepreneurs carry on the competitive process and the competitive process, in turn, is the driving force behind social evolution. In the realm of money, Hayek (1976, p. 47), beginning from the right of contract, argues that banks not only have the right to issue fiat paper money, but any other financial instrument with

[7]On these points, see Hoppe, Hülsmann, and Block (1998, pp. 19-50).

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"moneyness" or "near-moneyness" they might like to attempt to use in the competitive process.[8]

Initially, Mises did not argue for a pure private property order in money, along the lines of Rothbard, precisely because he considered private property a means to an end. Instead, he settled for a system that permitted state produced gold coins and privately issued fiduciary media. He, like Sennholz, thought that private property implied the legal right to issue money substitutes as long as they were perfectly redeemable on demand at par. But he came to realize that such a system could not attain his goal of a monetary regime that contained no money-side inflationary impetus. Given any foothold in monetary affairs, the state would always move step by step to an inflationary monetary regime, the exercise of which would eventually cripple, if not destroy, the market itself. Given the power to coin gold, the state would come to suppress the coinage of private mints by waiving its mintage fee. Once securely dominant as a money producer, it would make its coins legal tender, leading to the possibility of seigniorage from debasement. Likewise, if the state had the power to issue money substitutes, it would suppress the issue by private banks by waiving the printing or accounting fees. Once securely dominant as a money substitute producer, the state would rescind redemption to capture the revenue from inflating the stock of its, now, fiat paper money. Even if the state were reduced to merely having regulatory oversight of banks that could issue fiduciary media, it would eventually cartelize the banking system to permit coordinated monetary inflation.

As Mises came to realize, the goal of monetary reform must be the restoration of the monetary regime of the market economy in its purest form. No residual function of the state should be left as a beachhead from which it could launch another assault on the market monetary system. He wrote:

> Sound money still means today what it meant in the nineteenth century: the gold standard. The eminence of the gold standard consists in the fact that it makes the determination of the monetary unit's purchasing power independent of the measures of governments. It wrests from the hands of the "economic tsars" their most redoubtable instrument. It makes it impossible for them to inflate. (Mises 1980, p. 480)

To achieve the goal of eliminating any possible source of monetary inflation, Mises was willing to curtail the legal right of private property he thought banks had to issue fiduciary media. Because he thought that the issue of fiduciary media in a coordinated banking system has no limitation and that such a system was either theoretically likely or historically entrenched in the American economy, he called for a special legal prohibition of any further issue of fiduciary media. Concerning monetary reform in America, he wrote:

> The first step must be a radical and unconditional abandonment of any further inflation. The total amount of dollar bills . . . must not be increased by further issuance. No bank must be permitted to expand the total amount of its deposits subject to check or the balance of such deposits . . . otherwise than by receiving cash deposits in legal-tender bank notes. . . . This means a rigid 100 percent reserve for all future deposits; that is, all deposits not already in existence on the first day of the reform. (Mises 1980, p. 491)

[8]Hayek approvingly quotes these terms from Machlup.

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Sennholz, in contrast to Mises and like Hayek, saw the goal of monetary reform as the elimination of the unjust monopoly privilege the state affords itself in the realm of money. He wrote:

> The primary objective must always be the abolition of the money monopoly and legal-tender coercion. Man possessed, prior to the formation of any state, the right to provide for his own sustenance. He has an inalienable right to his life and to sustain it through his own effort and ability. Every restraint of this right, whether practiced by a monarch or a popular assembly, is a degree of tyranny. (Sennholz 1985, p. 77)

Sennholz, like Mises, thought that monetary reform must restrain monetary inflation, but by rejecting Mises's position that private property is primarily a means to an end and hence, his strategy of eliminating monetary inflation by creating a special legal prohibition, Sennholz was left to rely upon his view that the obligation of redemption would sufficiently restrain the issue of fiduciary media in a monetary system that prohibited monopoly privileges in money production and permitted banks to issue fiduciary media as a right of contract.

Proposals for Monetary Reform

Rothbard proposes dissolving both the Federal Deposit Insurance Corporation and the Federal Reserve System, the latter by liquidating its assets to pay its liabilities and eliminating its regulatory functions. Treasury securities and other state issued paper assets owned by the Fed would be cancelled and its gold stock revalued to permit 100-percent redemption of all Federal Reserve Notes and Federal Reserve Deposits. The gold stock should be claimed by the note and deposit holders and redeemed for coins newly minted from the Fed gold stock by the Treasury Department. Banks would then have their reserves fully converted to gold and would maintain their own money substitutes without special privileges from the state. These provisions are an interim step to the establishment of 100-percent reserve banking, which Rothbard (1994, pp. 146-51) would presumably phase in by, for example, raising the required reserve ratio over time. To achieve 100-percent reserve banking in one fell swoop, Rothbard advocates defining the redemption rate of the dollar into gold so that all bank deposits, as well as Fed Notes and Deposits, could be redeemed into the Fed's gold stock. Whether immediately or eventually, the issue of fiduciary media would be legally prohibited (Rothbard 1992, pp. 12-14; 1983, pp. 254-69).

As Rothbard notes, the unresolved issue raised by his plan is whether it is better to undergo a deflation of the money stock from the immediate elimination of fiduciary media or to permit a sizeable wealth transfer to banks from backing all their money substitutes with gold reserves. The advantage of monetary deflation, and the concomitant credit contraction, is that it directly restores the economizing of the market in money and credit. Without a contraction of credit to reestablish 100-percent reserves, banks would never return, strictly, to financial intermediation of credit; but, instead would maintain a fixed amount of circulation credit. Leaving existing fiduciary media and circulation credit in place freezes the malinvestments from the prior credit expansion based on the issue of fiduciary media into the production structure and distorts the avenues of future saving and investing, even when they are based solely upon commodity credit and monetary certificates. Moreover, the liquidation and restructuring of the production structure that would be necessary to restore the operation of the market in Rothbard's reform is no different in kind from that of any bust following a boom. And since the banks would not be under the financial pressure that bears down upon them in a bust, they would have more leeway in managing liquidation. Even the magnitude of the restructuring could be lessened if banks

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built their reserves to 100 percent by choosing to sell Treasury securities and shorter-term loans rather than longer-term loans. And even if the magnitude of the liquidation and restructuring process exceeded that of a typical bust, the negative consequences of the process depend more upon the existence of state intervention designed to prevent or retard it than on the magnitude of liquidation and restructuring needed to restore the production structure. Therefore, the pain of liquidation is a reason to call for the elimination of these state interventions more than it is to prevent liquidation itself. Also, the state has grown to such gigantic proportions that liquidation and reconstruction of the production structure would follow in the wake of any significant rollback of the state. Imagine the restructuring that would take place as a result of reforms that Austrian economists typically call for, say if the state's budget was cut 90 percent or even if the budget of a large state program, say that of defense, was cut 90 percent. No advocate of *laissez faire* accepts the pain of liquidation and restructuring as an argument against a significant rollback of the state in any other area except monetary reform because it would be tantamount to accepting the *status quo*.[9] At most, such advocates call for a graduated reform program to soften the blow of the adjustment. Even Rothbard himself, who was no gradualist in matters of reform, is willing to entertain a gradualist plan. But his more radical proposal might still be superior to a gradualist one if all state impediments to liquidation and reconstruction are removed prior to monetary reform. If, however, his nondeflationary option is deemed superior on prudential grounds (because, for example, the requisite elimination of state intervention necessary to avoid a prolonged and painful liquidation and restructuring process under his immediate deflationary proposal is not politically possible or because the interim period in which banks gradually build their reserves to 100 percent under his gradualist deflationary proposal leaves a window of opportunity for the state to reassert its power over monetary affairs) then the wealth transfer to banks that Rothbard considers unjust could be compensated for by having the banks surrender all or part of their Treasury securities for the gold reserves they receive from the Fed. This asset swap would have the added advantage of permitting even more of the national debt to be cancelled when the Fed is liquidated.

Mises's reform program is less thoroughgoing than Rothbard's, but nonetheless attains the goal, at least temporarily, of permitting no further monetary inflation and credit expansion. This would be done by freezing the stock of Fed notes and prohibiting any further issue of fiduciary media. Simultaneously, the market in gold must be unfettered by any state intervention and a transition period allowed in which the gold market would be free to reach market-clearing conditions. Once the market-clearing price of gold has been established, Mises advocates the creation of a Conversion Agency by the state with the main function of redeeming dollars for the state's gold stock at the parity value. To restore the use of gold coin as a medium of exchange and thereby, forestall a replay of progressive state intervention into the monetary regime, Mises calls for middle-level denominations of Fed currency to be withdrawn from circulation so that gold coin itself would be held by people in their cash balances and used by them in transactions. The Conversion Agency could then issue new small and

[9]On the exception made for monetary reform, Sennholz writes,

> No reasonable economist would want to revolutionize economic life through a radical monetary reform. He does not want to make gold the only money, forbidding government issue of any kind and suppressing bank notes and demand deposits used as media of exchange. Such a reform would require radical government intervention and greatly reduce the country's money supply. Prices and wages would have to be drastically cut, which no modern society could withstand in an orderly fashion. (1973, pp. 58-59)

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large denomination notes when its gold stock increased or when old notes became too worn to remain in use (Mises 1980, pp. 490-95).

In addition to preventing future monetary inflation by prohibiting any further issue of fiduciary media, Mises sought to prevent monetary deflation by permitting existing fiduciary media to remain in use. As noted above, a nondeflationary program has the drawback of freezing malinvestments into the production structure and making future saving and investing less economizing than it would be with complete liquidation and restructuring. Moreover, Mises's reform leaves the state enough of a role in monetary affairs to reassert an inflationary monetary regime over time. Despite his calls to keep the Fed from intervening, as long as it exists its regulatory powers over banks remain a beachhead from which it could reassert its central-banking powers. Likewise, the Conversion Agency could extend its powers over time to include issuing unbacked notes to help fund the state "temporarily" in times of "crisis." As Mises (1998, pp. 851-57) himself argued, any level of state intervention tends to be unstable resulting either in an expansion or contraction over time. It is better, then, to eliminate intervention altogether.

The reform program of the free bankers accepts Fed notes as money proper, to eventually be held exclusively as bank reserves, and the freedom of banks to issue their own notes redeemable on demand (but with option clauses permitting temporary suspension of redemption) into Fed notes in addition to their checkable deposits, which would also be redeemable into Fed notes on demand. Once public demand for bank notes rose sufficiently, then the stock of Fed notes, the managed expansion of which would now no longer be needed to accommodate increases in money demand, could be permanently frozen and held exclusively by banks as reserves. Bank regulations covering reserve requirements, interstate banking, and bank diversification would be repealed. To help bank notes supplant Fed notes as a medium of exchange, which the free bankers agree would be problematic since they are currently the generally accepted medium of exchange, the Fed should saddle them with special disadvantages, including making replacement Fed notes oversized, printed in red ink, or issued in odd denominations. Once Fed notes nearly left circulation altogether, then their stock could be frozen and the Federal Reserve Board and Federal Open Market Committee would be dissolved. The Fed's clearing operations would be privatized by turning over the assets of the twelve district banks to their stockholders. The private clearinghouse would then centralize all Fed notes held as reserves which were not needed by banks to fulfill their redemption obligations. Like clearinghouse operations, the insurance of bank liabilities would be left to the market. The state should not interfere if something else arose to displace Fed notes as money proper, such as gold or silver or even foreign currency or privately issued fiat paper money (Selgin 1988, pp. 167-72).

Although it recognizes the difficulty of newly issued bank notes supplanting Fed notes as media of exchange, the free bankers' proposal has not faced the magnitude of this problem. It is not a simple matter of overcoming a long-standing preference for one well-established thing with another newly offered thing of equal serviceability; as in choosing turkey over chicken as a source of protein. It is, instead, a problem of making something that is not a medium of exchange into such a medium and one superior to the existing money. As Mises argues, to become a medium of exchange, an item must be redeemable on demand at par for money. Only a practice of such redemption by the issuer of the money substitute can build a clientele, including noncustomers, among whom it serves as a medium of exchange. In a market economy, banks can issue any financial instrument made profitable by its customers' demand, even interest-bearing checkable deposits. But they cannot use the incentive of an interest payment to build a clientele for its use among noncustomers. If the incentive is given to the customer, it cannot simultaneously go to the noncustomer and *vice versa*.

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If it goes to the customer, then the noncustomer receives no benefit sufficient to overcome the cost of accepting an option-clause money substitute. (If there is no option clause on fiduciary media, then the banks and their customers have committed fraud with their noncustomer clientele and if there are no fiduciary media then banks have no interest incentive to give.) The noncustomer would always have the alternative of insisting on money itself or money certificates, if other banks found that demand for their money certificates was great enough to cover the costs of producing them and hence, made them available. If the incentive goes to the noncustomer, then the customer has no incentive to demand fiduciary media money substitutes. It is difficult, therefore, to see how option-clause money substitutes could ever supplant money itself and money certificates in a market economy.

Moreover, as discussed above, if the free bankers reform could be made to work it would establish a cartelized banking system, not a market of competitive, independent banks. Therefore, it would permit unlimited monetary inflation and result in credit expansion and the boom-bust cycle. Having failed to eliminate the main economic problem of the existing system, it would be subject to repeated efforts at reform and, likely, reform in the direction of more state control. And even if it operated in the manner described by the free bankers, the role of the state in the system is even larger than in Mises's and hence, the state is even more likely to rollback reform and reassert its power over money and banking. Because the Fed retains the power to manage its own notes during the period of transition to bank notes, for example, it may do so in a manner to retain its power and await the opportunity to reassert itself. Even after the transition period when Fed Notes serve almost exclusively as bank reserves, the Fed is still in a position, albeit a weakened one, to reclaim its monetary authority. All that it would need is the opportunity provided by a financial crisis, which remains likely in the type of monetary system envisioned by the free bankers.

Hayek's reform program calls for the repeal of all legal tender laws and legal disabilities to privately produced money so as to eliminate the government monopoly on money production. Given this, he believes that each private bank would issue its own money, denominated in its own units, and manage its supply to render its value stable or predictable in its variations because stable or predictable value is what users of a medium of exchange would value most about it. When traders saw that certain bank monies were more stable or predictable in value than state money, they would begin to use them and eventually supplant state money if it, too, was not managed in a sound way. Once established, the competitive process among banks would lead to unpredictable, but beneficial, innovations in money. According to Hayek (1976, pp. 92-101), the main obstacle to his proposal is public opinion in favor of the state's money and that a "free money movement" is needed to overcome it in the same way that the nineteenth-century "free trade movement" convinced the public to reject mercantilism and accept free trade.

Hayek's proposal suffers more severely than that of the free bankers from rejecting the Menger-Mises dictum concerning the introduction of a new money. Given that Fed notes are money, a bank would find it virtually impossible to build a clientele for its own fiat paper notes, denominated in "ducats." Even those customers of a bank who were eager to acquire a money of stable value would face an enormous disability in accepting its fiat paper notes. Because these notes are not traded on the market and therefore, have no exchange value, i.e., there are no "ducat" prices for goods or exchange rates for other monies, no one could determine how much of them to accept or give in exchange for goods. And even if a few customers accepted the notes at some exchange rate for dollars that would do nothing to make them a medium of exchange. It would merely establish a dollar price for "ducats" in the same way that prices are established for all goods that trade for and against money. Within an established monetary market economy something can only become a medium of exchange by

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first becoming a money substitute, i.e., by the issuer redeeming them for money on demand at par. But, then, such a money substitute could become fiat paper money only by a permanent rescinding of redemption, an act which violates private property rights. Moreover, by permitting the state to openly compete against private money producers, Hayek's reform establishes only the mixed economy, not the market economy. And although it is true that in the mixed economy the state's operation is subject, at least somewhat, to the market, it still distorts the economizing activity of the pure market economy. Having the power to coerce allows the state to circumvent the stricture of economic calculation to some degree. No private enterprise can cover losses or raise capital funding with tax revenues. And no advocates of *laissez faire* would claim that the market economy had been restored if the state was to operate facilities in various industries even if it did so without legal protection from private enterprise competition. Rescinding the privilege of first class mail delivery, for example, would not restore a free market in this service because the state operation could rely on tax-funded subsidies to out compete its private rivals. The market economy is not established unless all enterprise is private.

To settle for the mixed economy makes it easier for the state to reassert, or even maintain, its dominance in monetary affairs than it could under the proposals of either Mises or the free bankers, in which the state is left with only a subsidiary role in monetary affairs. Even if the success of competing monies depended only on the stability or predictability of their values, as Hayek contends, all the state need do to forestall competition, since it dominates the market already, is manage its money to produce this result. At an opportune moment in the future, it would then seize the initiative to pass legal tender laws and begin to inflate anew.

Sennholz's proposal is similar to Hayek's in that he seeks to eliminate the state's monopoly over money and establish the legal foundation of private money production. "We seek no reform law, no restoration law, no conversion or parity, no government cooperation: merely freedom," Sennholz wrote, "the road is short and direct, and yet, depending on the resistance offered by ignorance and prejudice, by political greed and lust for power, it may take us many years to traverse." Like Hayek, Sennholz believes that reform must be fought on all fronts by a "free money movement" that works "through information, education, legislation, litigation, and demonstration." The ultimate goal of such a movement is to repeal "all legal tender laws" and rescind "all monopoly banking privileges." In other words, establish the conditions under which private money could develop in open competition with government money. The result of reestablishing a free market in money, Sennholz argues, is that "good money would drive out bad money." The government would only be able to maintain its role as a money producer by emitting sound money, freely chosen by traders in the market. Given freedom in the realm of money, Sennholz (1985, pp. 77-83) is certain that people will select gold.

Although this proposal does not suffer from some of the difficulties demonstrated by Mises in those of the free bankers and Hayek, several problems with it remain. First, like Hayek's proposal, it does not restore the market economy, but only establishes the mixed economy. Therefore, the state could use its taxing and subsidizing power to give its monetary operations a competitive advantage. If the state were given the opportunity to compete against private mints in the production of gold and silver coins, nothing would prevent it from providing the minting service for free and covering its losses with tax revenues. It would, thereby, forestall private enterprise and retain its dominance over money. Then, at an opportune time in the future, the state could proceed, step by step, to reestablish its fiat-paper system. Although the system of state minting of coins would be preferable to the current fiat-paper regime, it would not achieve the fundamental goal of monetary reform, which is the permanent restoration of the market economy in the realm of money.

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Second, the transition period from the current monetary regime to the restoration of a gold standard raises additional problems. The development of money in a free market conforms to two principles: the selection of the commodity most suited to performing the medium of exchange function (presumably still gold) and the elimination of multiple monies. Traders tend to adopt a single commodity as money because of the superior properties of gold as a medium of exchange, a tendency reenforced by the benefit of eliminating the direct exchange of monies when trading from one market, in which one commodity is money, to another market, in which a different commodity is money. The Sennholz proposal permits, although it does not require, the retrogression of this tendency with different entrepreneurs trying out different commodities as money. But gold's superiority can be objectively established. Hence, the eventual adoption of gold as money is nearly certain, making the period of transition to reestablish gold as money unnecessary. It would be more efficacious in reaching this goal to directly restore the gold standard by redemption of the dollar into gold and then permitting private enterprise to compete within the monetary standard that would arise eventually anyway. This modification would maintain the benefits of a uniform money while allowing traders to choose any commodity they prefer as money. But their selection would be constrained to included only those commodities superior to gold in the properties of a medium of exchange and therefore, with a reasonable possibility of supplanting gold as money.

Moreover, the current dominance of the dollar as money implies another difficulty for private enterprise during the transition period. Even if entrepreneurs, under the Sennholz proposal, all adopt gold instead of trying out other commodities as well, their money will face a difficult task in competing with the dollar. The transition period in which gold slowly displaces the dollar may be extended by a policy of the state to increasing the purchasing power of the dollar, by ceasing monetary inflation, or by a policy of increasing the exchange ratio between the dollar and gold, by selling gold. In any case, this transition is unnecessary. By making the dollar redeemable into gold, gold becomes money immediately.

Finally, Sennholz's proposal does not eliminate the problem of monetary deflation during the transition. As noted above, he was highly critical of proposals that required such deflation, but his own reform suffers from the same malady, albeit not of the severity of that required by Rothbard's proposal. To restore freedom in banking, the Fed's regulatory powers would have to be eliminated even if its money production activity remained intact. Under the Fed's coordination, however, bank reserves have been lowered to historically unprecedented levels. A restoration of free, competitive, independent banking would certainly involve the buildup of bank reserves from the current level of 10 percent. Even in the semi-cartelized banking system of the nineteenth century, banks tended to keep reserves between 25–40 percent of their money substitutes. But an accumulation of reserves requires the same deflationary process as would occur under Rothbard's proposal. Banks would have to reduce their issue of fiduciary media and circulation credit by liquidating loans to buildup their reserves and therefore, set in motion a restructuring of the production structure.

Conclusion

For the Austrian economists surveyed above, the goal of monetary reform is to permanently restore the market economy in money. It is to return to the highest stage of development of money on the market as explained by Menger and Mises. Monetary reform, therefore, should leave no role for the state and the slightest possibility of the state reasserting its power over monetary affairs. Among the proposals surveyed, the one offered by Rothbard most fully attains this end. Gold should be made money in

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one bold stroke by making the dollar redeemable for gold at a fixed rate. Fed currency would then become a money substitute along with the other forms of money substitutes such as checkable deposits. The rate of redemption should be set either to establish one hundred percent reserves of gold against Fed notes and Fed deposits or all money substitutes. If the latter, then banks should swap Treasury securities for gold reserves used to back their fiduciary media. If the former, then all state interventions that would hamper liquidation and restructuring of the production structure should be repealed. Deciding between the two would be a prudential matter. The important point is to eliminate the Fed altogether and prevent, by law, the state from establishing its own monetary operations in competition with private enterprise or from regulating financial institutions in any respect.

As part of the liquidation of the Fed, a bank consortium or a private group of capitalist-entrepreneurs could purchase the check clearing and auditing apparatuses of the Fed to make these activities private. If this proved unprofitable, private enterprises would emerge to provide these services as long as banks found it valuable enough to pay fees high enough to cover the costs of providing check clearing and bank clientele found it valuable enough to pay fees high enough to cover the costs of auditing.

Private mints would produce coins according to profit and loss, which would be determined by the demand for money. Banks would be legally free to issue money certificates as titles of ownership to money proper and other nonmonetary financial instruments. All such issues would be regulated by profit and loss as determined by demands for them. Any issue of fiduciary media should be made illegal.

No matter what reform proposal is adopted, however, the state will attempt to strike back against it to restore to itself the immense benefits it receives from the existing system. A reform's long-run success, then, depends on making it as difficult as possible for the state to reassert its power. No matter how successful establishing the mixed economy, as Hayek or Sennholz propose, or a halfway house, as Mises or the free bankers propose, may prove to be in the short run, neither such reform is as likely to endure as Rothbard's.

Whatever proposal for the restoration of a market monetary regime is in the end adopted, however, all proponents of this goal can accent to the sentiments express by Sennholz:

> In freedom, the money and banking industry can create sound and honest currencies, just as other free industries can provide efficient and reliable products. Freedom of money and freedom of banking, these are the principles that must guide our steps. (1985, p. 83)

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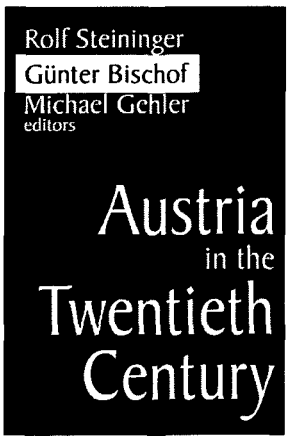

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Before and After the Euro: Strategies for Sound Money in the 21st Century

Philippe Nataf

Since August 15, 1971, the entire world has been submitted to *de facto* paper monies. No commodities, not even silver or gold could be used for commercial transactions.

To render fiat paper currencies permanent, gold was officially "demonetized" in 1976. European currencies began to float against the dollar or the yen. The exchange rates fluctuated rapidly and the magnitude of their variations threatened European as well as world trade.

A "solution" was attempted through "fixed exchange rates" first internationally (December 1971), and later (1972) a limited system, the European "snake" was established. The Smithsonian agreement collapsed quickly (March 1973) and the snake survived only a few years. The European fixed rates mechanism collapsed in the mid-1970s against a backdrop of worldwide rising inflation. The amplitude and speed of exchange rate variations could obviously not correspond to changing purchasing powers of European currencies. As a result new obstacles to the European trade of the common market appeared and necessitated a quick remedy. To ensure a European zone of monetary stability, a "European Monetary System" was created in March 1979. Although more sophisticated than the "snake," the European Currency Unit ("ECU") was introduced in the middle, this new system was still an "arbitrary fixed exchange rate mechanism" for the European fiat paper currencies. Its destiny could not be monetary stability and that defect was explained as early as 1979 by Professor Pascal Salin in "*L'unité monétaire européenne: au profit de qui?*"

Monetary instability took the form of sudden devaluations and occasional reevaluations. In August 1993, the "fixed rates" were allowed to fluctuate within a margin of + or - 15 percent around the ECU. *De facto* the European Monetary System had collapsed. Early in the 1990s, it was generally admitted that "fiat national currencies" seriously hampered free trade in Europe, either through free or dirty float or through fixed rates mechanisms. Consequently, it was decided to abandon the national monies and to introduce a new currency called the "euro."

Although the old fiat papers should not be regretted, it is important to assess if the euro, in the form of a single new fiat money, is the only alternative. If another direction is possible and desirable, it then becomes appropriate to investigate the means to get there.

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To answer these questions we will begin by an overview of monetary history during the last two centuries, then we will assess the contemporary problems of European monetary integration and a free market alternative for sound money in Europe and potentially for the world.

Monetary History Overview from 1792 to the Present

The Gold Coin Standard

The gold coin standard of the nineteenth and twentieth centuries appeared progressively in different ways. The United States adopted a bimetallic system of gold and silver in 1792. The legal ratio between gold and silver of 15 to 1 was established with reference to the then current market rate (1 gram of gold was worth 15 grams of silver *de facto* and *de jure*).

France also adopted silver-gold bimetallism as early as 1803 with a legal ratio of 15.5 to 1. But it was left to England to start, after the Napoleonic Wars, the realization of an international gold standard. Metallic convertibility, reestablished *de jure* in 1816 and *de facto* in 1821, enabled gold to function as the basic money of the United Kingdom. Progressively gold became the international money.

Since antiquity gold has been used especially for large scale trade. Historian Henri Pirenne (1971, pp. 29-30; 1985, pp. 81-82 and 250-83) maintains that gold disappeared in Western Europe during the great commercial contraction of the eighth and ninth centuries, but that it reappeared with trade rebirth (eleventh to thirteenth centuries).

It has been customary over the last two centuries to speak of the convertibility or inconvertibility of national currencies (dollar, pound, franc). In the nineteenth century the dollar was defined as 1504.65 mg. of pure gold, the pound as 7.322 gr., the franc as 290.32 mg.

This means that "national currencies" like the dollar, the pound sterling, or the French franc were only names or more exactly claims to a certain amount of gold.

A 5 pound sterling note was a claim redeemable into 5 coins (5 sovereigns) containing 7.322 gr. of pure gold each. The 500 franc note was redeemable into 25 coins of 20 francs containing 5.8064 gr. of pure gold each. The 5 dollar notes were redeemable into 5 dollar coins containing 7.5231 gr. of pure gold and so on for each currency.

It insured "fixed exchange rates" between the different monetary units. Thus, in round numbers, one pound was worth 25 francs or 5 dollars. One dollar was worth 5 francs (1 pound = 5 dollars = 25 francs).

Consequently these "fixed exchange rates" did not stem from arbitrary control but rather from the nature itself of these convertible "national currencies," as, in the same manner, a dime (a 10 cent coin) is worth exactly two nickels (5 cent coins).

In the classic gold standard, gold coins form the basis of the monetary system. Bank notes and deposits are not strictly speaking money but only claims on money, claims repayable in gold. Notwithstanding some obstacles the issuance of these money substitutes tends to adjust to the needs and preferences of the users. The basic money supply in gold is also independent of the political powers. The quantity of gold in circulation is not decided by monetary authorities, the central bank or the government, but rather by the users' demand, through free coinage.

Free coinage in the United States, France, England and later in other countries represents an essential characteristic of the gold standard. Each citizen has the right to ask the mint to produce new coins at his asking. (Napoleons of 20 francs, sovereigns of 1 pound, or 20 dollar coins for example). Thus the quantity of circulating gold is not arbitrarily fixed by a government agency but by a spontaneous process adjusting supply to demand in each country and consequently throughout the whole

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area trading in gold. To avoid the long and complex history of silver (as a parallel or a bimetallic standard) and consequently the working of Gresham's Law in the nineteenth century we refer the reader to the in-depth and pertinent study realized Charles Coquelin (1844, pp. 350-74).

It is necessary to distinguish between free coinage and private coinage. Private coinage is the minting of coins by numerous private actors. It existed in several American states before the Civil War. Free coinage is a similar process but through the government monopoly mint which unwisely forbids engraving the weight on the issued coins. This prohibition was criticized throughout the nineteenth century by J.B. Say and later by the *Journal des Economistes* (J. Garnier, J.G. Courcelle-Seneuil, M. Chevalier and many others). However, this criticism does not change the fact that the coin quantity was not affected by this restriction. The questioning (by the same economists) of the perverse effects of bimetallism cannot be analyzed here, but does not change the general outlook. In short, under free as well as under private coinage no government can control the money supply base.

It is important to note that the sound functioning of the gold standard did not need legal tender for bank notes. For instance, French bank notes were used without legal tender until 1870. They had *cours libre* (free tender or freedom of acceptance). For the Bank of France as well as for departmental banks of issue it meant that their notes "could be refused as a means of payment." Legal tender in 1848-1850 was an exception resulting, for less than two years, from the fall of the French monarchy. "Fiat paper money" (*cours forcé*) should be clearly distinguished from "legal tender." Fiat paper means "the suspension of the obligation to redeem bank notes." If a "legal tender" note is still convertible, payable in commodity money, fiat paper money on the contrary is inconvertible. It is irredeemable and the quantity issued does not depend on the wishes of the users but of the decision of a public monopoly of one kind or another.

The users are forced to accept fiat notes in payment of any transaction. Bank notes can thus change their nature overnight without any notice by public opinion or immediate trouble in daily life. From a simple claim or money substitute, the bank note can instantly become a money by itself, a basic money in its narrower sense. Without much public understanding a commodity monetary system can be quickly transformed into a completely new system based on an inconvertible fiat paper. Very rare in the nineteenth century, "fiat national currencies" were imposed *de facto* in 1971 and *de jure* in 1976.

Professor Murray N. Rothbard explained the importance of the gold standard in his enlightening booklet *What Has Government Done to Our Money?* "The international gold standard," he wrote,

> meant that the benefits of having one money medium were extended throughout the world. One of the reasons for the growth and prosperity of the United States has been the fact that we have enjoyed *one* money throughout the large area of the country. We have had a gold or at least a single dollar standard with the entire country, and did not have to suffer the chaos of each city and county issuing its own money which would then fluctuate with respect to the moneys of all the other cities and counties. The nineteenth century saw the benefits of one money throughout the civilized world. One money facilitated freedom of trade, investment, and travel throughout that trading and monetary area, with the consequent growth of specialization and the international division of labor.
>
> It must be emphasized that gold was not selected arbitrarily by governments to be the monetary standard. Gold had developed for many centuries on the free market as the best money; as the commodity providing the most stable and desirable monetary medium. Above all, the supply and

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> provision of gold was subject only to market forces, and not to the arbitrary printing press of government. (Rothbard 1985, p. 51)

The international gold standard provided "an automatic market mechanism for keeping the balance of payments of each country in equilibrium" (p. 51). How did this spontaneous adjustment function? To answer this question let us suppose monetary inflation in one country alone, there ensues an internal increase of prices. Imports are consequently stimulated and exports decreased. As a result some gold has to leave the country to pay for the increased imports. Monetary inflation is forced to stop and thus, price inflation. The balance of payments then tends to recover its equilibrium. Under these conditions a "currency" cannot drop significantly on the foreign exchange market.

Each national currency, in such a system, can fluctuate only within narrow margins called "gold points." A special edition of the *Revue Economique* states that "from 1821 to 1869 the maximum variations of gold prices . . . were of 1% for France and 0,1% in England" (Boyer-Xambeu 1994, p. 1167). If the pound sterling drops on the foreign exchange market for an amount in excess of the cost of gold transportation, there ensues a "gold drain" out of England which forces its value back to parity. Inversely, if the pound appreciates, there ensues an inflow of gold into England which forces its value back down to parity. Under the gold standard the currency exchange rates are forced, by a market mechanism, to fluctuate within such narrow margins (less than 1 percent) that one could rightly call this a "fixed exchange rate" system.

The franc/dollar ratio, during the 20-year period 1979-1999, is significant in this regard. The dollar was worth between 4 and 10 french francs during that period. Major and rapid variations recurred frequently. The "stabilization" at around 6 francs was far from its supposed purchasing power parity of 6.5 francs. As an example, let us suppose a parity of 1 dollar for 5 francs under a gold standard. This means that the maximum variation would be less than 5 centimes (a dollar could not be exchanged for more than 5.05 francs or for less than 4.95 francs). With a parity of one dollar for one euro, under a gold standard, the dollar could fluctuate only within a narrow range (1.01 euro and 0.99 euro) and *vice versa* with the euro.

It is in this perspective that international monetary stability in the nineteenth century constituted an important factor for the development of international trade and economic progress. If not perfect, this monetary organization did not present the disadvantages engineered by fiat paper currencies: inflation and erratic fluctuations.

Some financial centers like Paris, London, or New York, working under central banking or under the bond deposit system, were disrupted by recurring business cycles. In contrast, Scotland and the six New England states, working under freedom of money and banking, did not engender the recurrence of booms and busts. Boston, Glasgow, or Edinburgh, benefiting from monetary competition did not generate such crises (Nataf 1982, 1984). Rather, these cities absorbed economic troubles coming from the outside with striking ease. It is thus logical to credit the classical gold standard, not with disturbances, but with stabilizing effects during its era.

From the Gold Standard to the Gold Exchange Standard (1914-1944)

The gold coin standard functioned until 1914. In order to finance the war, the pound, the franc, and the mark were *severed* from gold. Governments suspended their convertibility. Overnight, the European monetary framework based on gold was radically transformed and pounds, francs, and marks became merely fiat paper currencies which depreciated rapidly against gold or the dollar (still a gold dollar). The metallic parities disappeared *de facto* and the "national currencies" began to float in a disorderly fashion. This monetary chaos lasted long after the war.

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The will to reestablish a rational and stable international monetary system drove the Genoa Conference (1922) to reinstate gold as the international money. But it was only in 1925-1926 that gold convertibility was reestablished with one serious restriction, however. With the exception of the dollar, the European currencies were convertible only in bullion; thus the terminology of the gold bullion standard. Gold coins disappeared from European daily life. The monetary system became more flexible, the Bank of England was induced to use dollars as "reserves" in addition to its gold. Continental central banks added pound sterling to their own gold reserves in order to increase flexibility. This new international monetary system resembled a pyramid where the dollar was superimposed upon gold, the pound sterling on the dollar, and the European currencies on the British pound. In addition to gold, two "key currencies" were used as reserves, in a system where the different currencies, with the exception of the dollar, had their convertibility reinstated at overvalued pars. This monetary "construction" largely separated from the pre-war regulating mechanisms could only be unstable and short-lived. Known as the first gold exchange standard, this edifice lasted only a few years.

It is to fight monetary inflation and its consequences that Ludwig von Mises (1971, pp. 395-99) explained the advantages of free banking as early as 1924. In the 1966 edition of *Human Action* he again developed his views on that topic. Building on Cernushi's theories that, under freedom of banks, monetary expansion (including notes) would be completely curtailed, Mises explained that "free banking keeps credit expansion within narrow limits" (p. 447). Business cycles would be eliminated under such a system. He sadly remarked that "nothing harmed the cause of liberalism more than the almost regular return of feverish booms and of the dramatic breakdown of bull markets followed by lingering slumps. Public opinion has become convinced that such happenings are inevitable in the unhampered market economy" (p. 444). For him the solution was clear: "Only free banking would have rendered the market economy secure against crises and depressions" (p. 443). Short of this, Mises insisted that, under a new gold standard, gold coins should be allowed to circulate.

Starting in 1931, England abandoned a new gold convertibility. Progressively, the European countries and even the United States followed the same path and the world was again subjected to widespread floating exchange rates of fiat paper currencies that would last until the end of the second world war.

The Role of Gold in the Bretton Woods System: The Stable Parities (1945-1971)

As early as 1944 the goal of the Bretton Woods conference was the reinstatement of a stable monetary system for all its participants.

It was decided that gold should serve anew as the base of the international system as during the period from 1926-1931, but with one significant difference. Instead of two "key currencies" there was only one, the dollar. As before, each "national currency" was defined as a weight of gold. Metallic parities would engender fixed exchanged rates.

Domestically inconvertible, the dollars served as reserves in assets of the European central banks. This new gold exchange standard carried a similar defect to the preceding one. Dollars accumulated outside the United States were in principle redeemable in gold by the Federal Reserve System. In fact, they continuously accumulated without repayment.

This new system, based on gold, demonstrated great stability from 1945 to 1958. Following a slight monetary creation the American balance of payments deteriorated from 1958 to 1960. There ensued weakness of the dollar that brought on a flight from the dollar and an increase of gold "prices" in the free market. To stop this variation it was decided that the gold "price" would be stabilized by central bank interventions in the free market. This gold Pool could only postpone the monetary dysfunction that in

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fact was worsening. To understand the monetary deterioration of this time a few figures will suffice. In 1957 the American gold stock approximated 25 billion dollars whereas the external claims for dollars did not exceed 10 billion dollars.

In the short run, the Bretton Woods system was not threatened. But the acceleration of monetary inflation in the United States would increase the deficit in the U.S. balance of payments. There followed a rapid growth in the dollar balances and a correlative decrease in the American gold stock. With the regulating mechanisms of the authentic gold standard, the gold coin standard, no longer functioning, dollar balances built up outside the United States. On March 17, 1968, the artificial "price" of gold on the free market (at $35 per ounce) became untenable. Central bank interventions on the Gold Pool were abandoned. A double market for gold was then created, one for monetary gold, the other for industrial gold.

Inflation and American deficits continued, external claims on dollars rapidly built up and exceeded 80 billion dollars. At the same time, the American gold stock diminished down to the critical threshold of 10 billion dollars. The free "price" of gold tripled and President Nixon was faced with a simple choice: either pronounce a major devaluation of the dollar or abandon the Bretton Woods system. He chose the second alternative and let the dollar float. In one day the international monetary system radically changed in nature. All metallic convertibilty was abolished and national currencies were nothing more than inconvertible paper monies fluctuating erratically against each other.

From De Facto *Inconvertibiliy to Legal Inconvertibility*

Such wide variations on the exchange markets slowed international trade so much that on December 18, 1971, the Smithsonian Agreement instituted a fixed exchange rate system with no basis in gold. This artificial arrangement could not function very long. It collapsed in February-March 1973, only 15 months after its inception. International monetary disorder rapidly regained ground. A worldwide recession followed in 1973 (explained only in part by oil price increases), an acceleration of monetary inflation in the United States, and double-digit price increases which engendered a significant drop in the dollar on the foreign exchange markets. Professor Hans F. Sennholz (1972, pp. 666-73) forecasted accurately in 1972 the "inflationary depression" of 1973-1974 known as "stagflation" and in 1975 he explained why *Gold Is Money*. The Jamaica agreement of January 1976 legally consecrated gold demonetization. All currencies lost their legal parities in gold. International law caught up with fact.

As a result, has gold lost any monetary role? Absolutely not. The monetary demand for gold increased after 1976 and consequently the free "price" of gold rose to over 800 dollars per ounce. A spontaneous and "unexpected" remonetization of gold began.

Professor Marchal noted in 1979 and in the 1984 reprint in his book *Le Système Monétaire International* that "the integral demonetization of gold is in no way established today and would not appear to be so in the near future" (p. 151). Two decades later history has proven him correct.

EURO: INCONVERTIBLE FIAT PAPER MONEY OR COMMODITY MONEY?

The Smithsonian Agreement (December 1971) on fixed exchange rates authorized the "national monies" to function within margins too wide for European currencies. So the the European "snake" (1972) was created, with narrower margins, which permitted fluctuations only within the "international tunnel." However, the collapse in March 1973, of the Smithsonian Agreement on worldwide fixed exchange rates broke the "tunnel" but not the "snake" which would last a few more years. By March 1976, it had

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completely collapsed and the erratic monetary variations threatened anew free trade within Europe.

Several solutions were proposed. They included suggestions such as a parallel common money, a Europa, a denationalization of money, and a new European Monetary System. This last project was adopted and began to function in 1979 with a European Currency Unit (ECU), a central component of the system. Basically, it was merely a new kind of arbitrarily fixed exchange rates of fiat paper monies.

In addition to the distortions of production and malinvestments engendered by the worldwide floating exchange rates, new distortions resulted from the European Monetary System (EMS). In effect, this system imposed artificial rates increasingly at variance with their real value (i.e., their purchasing power parity). Devaluations and sometimes reevaluations ensued one after another, then came "competitive devaluations." Logically this system became more and more unstable and the monetary crises of 1992-1993 forced the European governments to terminate its basic mechanism by allowing margins of plus or minus 15 percent.

As a result, two currencies could legally be exchanged with variations as large as 60 percent. Fixed exchanged rates had collapsed once again. It is within this context that the decision was made in favor of a "single money" rather than a "common money" in Europe. First called ECU or Ecu, its final name became the Euro.

But the European Union Treaty (Maastrich) did not "define" the Euro. It became a new fiat paper currency when it could have been a convertible gold money. The Europeans had and still have a choice and the scope of the present debate on monetary orientation should be extended to more basic questions. The Euro, introduced first as bank money from January 1999 through December 2001, replaced 12 European currencies in February 2002 after six weeks of withdrawals of "national" coins and notes. Euro coins and notes became the only "base" of Eurobank deposits. These new bank deposits were claims on the European token coins and notes but not on gold coins as they could have been.

Monetary Freedom and a Private Gold Coin Standard

Freedom in money and banking existed and performed extremely well in the past. So today's question is: can a private gold coin standard function in competition with the euro? The answer is yes, without any doubt. Monetary freedom would lead to, at least, a common and parallel gold money which could, in due course, become the basis for a convertible Euro, free of political manipulations.

Monetary Competition

To start down the road to sound money it would be necessary to abolish the obstacles to property rights and the freedom of contracts in the monetary domain. This would permit genuine monetary competition to emerge, as renowned economists proposed in the 1970s (Sennholz 1973; Hayek 1978, p. 19).[1] This implies:

A. The abolition of legal tender on national paper currencies.

B. For gold, this means: (1) abolition of the tax on gold; and (2) the freedom to contract in gold: in particular freedom of commercial transactions (buying and selling) and the freedom for banks to open time or demand deposit accounts in gold.

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[1]Professor Sennholz analyzed the 1987 crash in a booklet *The Great Depression: Will We Repeat It?* (1988) and in the *Savings and Loans Bailout* (1990) he explains the seeds of this new disaster.

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At this stage, a parallel gold standard competing with the euro would emerge gradually and spontaneously in any country that followed this route. If only two countries within the European Union were to start down this road, private gold money would become the common currency for them. This principle could be extended easily to all other 25 nations and obviously also to non-European countries.

The next stage requires: (3) the freedom to coin gold in existing mints; and (4) the right of users of money to freely determine the units of weight (ounces or grams) which best suit their needs.

For the countries that adopt this system, gold would gradually come to circulate both as a parallel and as a common currency. This common gold currency would compete with the European Central Bank (ECB) issued euro. Any monetary expansion of this nonconvertible paper currency would gradually provoke a trend toward the gold common money.

Monetary Privatization

From January 1, 1999 until January 1, 2002 the euro consisted only of "checkbook" money. It was only during the first six weeks of 2002 that previous token coins and bank notes were removed. During this six-week period the European Central Bank and the System of European Central Banks issued new token coins and notes labeled in euro.

There is no economic justification for prohibiting a private gold standard from circulating and competing with the euro. This private gold standard would thus provide the best obstacle to inflationary pressures on the European fiat paper money.

Without monetary competition the inevitable politization of the fiat euro could progressively pave the way for an evermore lax monetary policy. But, the present ECB policy of "price stability" is already generating severe production distortions and its correlated boom and bust cycle.

Depolitization of the Euro?

Monetary competition, a result of the abolition of legal tender, would seriously curtail the politization of the euro. But is it possible to completely separate the euro from politics without returning to the chaos of fiat national currencies (with either fixed or floating rates)? The answer is yes, certainly. A very simple alternative should be envisioned.

1. After a period of stabilization between the euro and new private gold standard, the euro could be "defined" by the weight of gold corresponding to the market rate.

2. At this moment, in addition to the issue of euro coins and euro notes, the European Union could authorize free coinage as it used to function in the nineteenth century. But today gold coins could be labeled simultaneously in euro and in their corresponding weight of gold.

3. Finally, the huge quantities of gold kept by European central banks could be used to ensure the gold convertibility of the euro. Consequently, the euro would be severed from political pressures and its control would be transferred to its users, that is the European citizens. Today owned by central banks, gold would return to millions of citizens' pockets. Instead of public and centralized ownership, gold would become a private and decentralized holding.

Money users would be free to count and calculate in euro, but they could also use other units such as ounces or grams of gold. They would be free to use coins, convertible bank notes or deposits of one kind or another. Diversity of monetary instruments would result from the free choices of money users. Several kinds of private monies could emerge from new monetary needs. It is however probable that the huge amount of gold already in the hands of millions of persons would be used first.

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This system would not lead to one of the past forms of the gold standard, but rather to a private gold standard of a new sort, beyond the manipulations of politicians and public authorities. Being the property of the users of money, the money supply would be determined by the holders of coins or claims on gold (notes or deposits). Freed from state control, the new commodity money would gradually and spontaneously generate monetary unification (integration) in Europe, without state-oriented constructivism; no central bank would be needed. It would not be subject to a "dirty float" and would tend to stabilize exchange rates with other paper currencies (the yen and the dollar in particular). But, because of its geographical dispersion, gold would in all likelihood become a universal common currency, and perhaps recover its role as a worldwide commodity currency. People would then hold a private gold standard, a source of monetary stability and economic progress. Actually a gold-euro has already been proposed by Aristotle (1994, pp. 72-79; 1996) a pseudonym for the Group of Paris), by Robert Mundell, and by several other economists.

Within this system, the production of the basic metallic money would be free. As a result of the free minting of gold coins, supply would adjust to demand. The new competition in currency would transform gold into a parallel and common currency. The sale or the redemption by central banks and ECB of their substantial gold assets, and the convertibility of bank notes, would limit their power to artificially increase money and bank credit. A system approaching true free banking would in fact be established. It would function like the Misesian model, that is without credit expansion as in a 100-percent reserve system. Free competition would tend to nearly eliminate the creation of new fiduciary media.

Freed from the burden of fluctuating exchange rates and dirty floating, as well as the malinvestments which flow from these, international trade would develop steadily and significantly. The risks of protectionism and trade wars would rapidly diminish. The disappearance of monetary depreciation would tend to cause interest rates to decline significantly and to increase the rate of savings. The private gold coin standard would impose a limit on deficit spending and would open the road for noninflationary economic progress. Spontaneous and gradual monetary unification would occur in Europe without any need for the European central bank. These steps, indeed, are the best way to escape from the politization of the euro and the current pressures to "ease" its monetary policy.

Another Road to Sound Money

As an alternative to these simple steps another route has already been opened by central banks. From time to time, they sell gold more or less discretely. It is a *de facto* privatization of gold. Gold centralized in public institutions could go back to private hands through this road. This trend should be openly encouraged and combined with the removal of legal tender laws (Sennholz 1985, pp. 61-83). This could be a path, not to "price stabilization" but to sound money and a definitive end of business fluctuations.[2]

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[2]For a historical "experience" of free banking, see Nataf (1993, chap. titled "New England's Depression-Proof Free Banking System").

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Relevance as a Virtue in Economics

Peter J. Boettke

In 1979 I entered Grove City College with three goals in mind: to play on the varsity basketball team, to prepare to be a high school basketball coach, and to marry my high-school sweetheart Rosemary, who was also attending Grove City. I achieved only one of these goals—marrying Rosemary only a few weeks after graduation in 1983. Injuries and other factors blocked my achievement of the first goal, and the discovery of economics redirected the second. I was a *convert* to economics. Many of the students who were serious about economics that I met at Grove City were already interested in the Austrian School of economics and free-market policy. But I was completely innocent of such things. I took economics because I had to in order to fulfill a requirement. By Christmas of 1979, I bought my father Milton Friedman's *Free to Choose* as his gift.

Dr. Hans Sennholz was my economics redeemer.[1] The summer before entering Grove City, I worked for a short stint digging pools. This was during the time of a gasoline shortage, and as the youngest member of the crew of workers, I was *entrusted* to siphon gasoline from one truck to another in the morning so we wouldn't have to wait in the long line before heading out to a job. During my first week of economics lectures, I learned why there were gasoline lines and why it was the fault of government policy. Economics was relevant to the life I was experiencing. I was hooked. The rest seemed to follow naturally. Economic competition was an activity where one businessman tried to defeat another by satisfying the customer better. Entrepreneurship represented the creative aspect of man in the market place. Frugality and prudence were virtues. Hard work and a sense of pride in one's work were to be expected of anyone hoping to make his mark in this world. As strange as this might sound to some, these lessons sunk in to me because they were analogous to the lessons that my coaches and my father had tried to get across to me.

Dr. Sennholz's lectures represented a transformative experience for me. As with any lasting conversion, my initial enthusiastic reaction was followed up by an extended period of critical study and slow adjustment of life's plans. I didn't get to play basketball, but I did play four years of varsity tennis, and I enjoyed an active

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[1]Many faculty at Grove City College during the time I was there did not have Ph.D.s and were referred to as professor, while faculty who had their Ph.D. were referred to as Dr. Thus, the respect signaled by the reference to Dr. Sennholz. Twenty years removed, I still cannot imagine addressing Dr. Sennholz in any other manner.

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social life with my fraternity throughout college. My career goals shifted from being a high-school basketball coach to becoming a lawyer that worked in the sports management field. It wasn't until the second half of my senior year that I decided that perhaps law school wasn't what I wanted. This again was due to Dr. Sennholz. In my junior year I attended a weekend seminar at FEE (Foundation for Economic Education), and after that I was invited to be a member of Dr. Sennholz's Graduate Seminar which met every Wednesday night in his office to discuss classic books.[2] I was at the time the only undergraduate student in the seminar. The other participants were visiting students from Argentina and others working on graduate degrees through the International College in California, where Dr. Sennholz was a faculty mentor. In the graduate seminar we read Adam Smith, David Ricardo, John Stuart Mill, Eugen von Böhm-Bawerk, and, of course, Ludwig von Mises. This seminar introduced me to the idea of wrestling with the ideas in original texts in economics. During my senior year, I wrote my seminar paper on the *methodenstreit*, and my enthusiasm for the free-market policy of the Austrian School was now complemented with a philosophical commitment to methodological dualism and the *a priori* nature of the science of human action. Law school no longer seemed like the right place to go after Grove City. So instead of enrolling in law school, I took a job teaching tennis after graduation, applied to Ph.D. programs in economics, and eventually chose to head off to George Mason University in 1984.

Graduate school, even at a school such as George Mason University, is devoted to learning how other economists think, the language they use, the models they create, and the evidence they provide. Very little of your economic education is devoted to studying the actual economy and the appropriate policy response to given problems. In short, you study the writings of other economists, not really the economy *per se*. As a teacher of economics since 1987, I have often thought about my own conversion experience and realized that the power behind Dr. Sennholz's approach was the relevance he conveyed about economics for understanding the real world. We spent little time on Keynes, less on Marx, and some on Friedman. For the most part Dr. Sennholz devoted his energy to applying the economic insights of the Austrian School to explaining the economic history of the industrial revolution, the Great Depression, the operation of a gold standard, and the failure of socialism, fascism, and interventionism. The benefits of free trade were extolled and the vices of protectionism were laid bare.

The Austrian School of economics, in Dr. Sennholz's lectures, was the most consistent and articulate advocate of the private-property, free enterprise system. But the Austrian School was prone to irrelevance just as other schools of economic thought trapped within the academy. Dr. Sennholz described the contemporary Austrian School to me, circa 1983, when I had started to lean toward the career of becoming a professional economist, in the following way: Kirzner was a methodologist who while engaging other scholars failed to seriously engage the world; Lachmann wrote a good book on capital but nothing else; Rothbard was content with being a radical libertarian that was irrelevant for the practical world of public policy; but the Sennholz *branch* of the Austrian School was constantly fighting the public-policy battle in Washington (or 'Washin' as he would pronounce it). At that time (and to this day) my sympathies were already with Rothbard's libertarianism so I tended to dismiss Sennholz's characterization as too conservative. And, as I delved more into the scholarship of the contemporary Austrian School I disagreed with his assessment of

[2]Sennholz gave me two conditions for joining the seminar: (1) that I wear a proper pair of trousers (at the time I was often in sweatpants or warm-up suits coming from tennis practices or the gym) and (2) that I keep up with the readings because as he told me in his characteristic style—"If you don't keep up, we kick you out."

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Kirzner and Lachmann and put more weight on the pure scholarly contributions of these individuals than their policy stance. But now in the middle of my career, I am coming to appreciate Dr. Sennholz's demand for continuous engagement with the world of public policy more than I have at any time since I was his student 20 years ago. We economists should be mindful of our relevance to public policy debates. We do better economics when the work we do is relevant to addressing real-world problems. Of course, science and philosophy matter and truth should be our ultimate goal. But hopefully truth yields better insight into how the world works, and on the basis of that correct understanding we should be able to engage the world more directly. We must avoid the economist's (Austrian or otherwise) vice of focusing our attention exclusively on other economists rather than on the economy.[3]

Dr. Sennholz's Own Scholarship as an Example of Striving for Relevance

The most significant contributions Dr. Sennholz made in his career were undoubtedly in the classroom and lecture hall. A dynamic public speaker (who knew how to use his German accent to highlight points), Dr. Sennholz spoke to thousands of college students and lay audiences over his years at Grove City College and then as President of FEE.[4] He wrote continuous commentaries of the world of public policy, and continues to do so today on his Web site (www.sennholz.com). Many of these pieces are not what one could refer to as scholarship, but are instead exercises in economic journalism. Some actually are more moral sermons than economics–sermons on the private property order and sound monetary policy. In addition to this commitment to almost daily engagement in contemporary public policy issues, Dr. Sennholz did publish books intended to be more lasting contributions. Characteristic of his intellectual interests, however, each of these books are devoted to public policy issues—European development after Word War II in the 1950s (1955), the problems of inflation in the 1970s (1979), the issue of unemployment in the early 1980s (1987a), the looming problem of debts and deficits in the late 1980s (1987b), and a proposal to restore monetary freedom (1985).

In each of these books, Dr. Sennholz sought to use the important insights of the Austrian School of economics, and in particular those of his teacher Ludwig von Mises, to expose the failings of government policy to manage the economic system. Mises, along with Wilhelm Röpke, were the most influential economists on Dr. Sennholz and this shows in his emphasis on the security of private property, open trade, free labor, sound money, and fiscal responsibility. The utilitarianism of Mises shows in the consequentialist arguments Dr. Sennholz provides against government intervention and Röpke's moralism shows through in the ethical dimension that Dr. Sennholz rarely leaves out of his work. The basic message in all of Dr. Sennholz's writings is that the free market economy is not just efficient, but morally correct. Government interference in the natural workings of the economy is not just ineffective, but an evil that must be resisted. Inflationary policies not only distort economic calculation, but also represent a fundamental breach of trust between the government

[3]On the important role that economists can play in society see Dan Klein, ed. (1999) and Dan Klein (2001). For the classic statement see W.H. Hutt (1990).

[4]Within Austrian circles, Dr. Sennholz's list of students is quite impressive and includes Walter Grinder, Jeff Hummel, Sanford Ikeda, and Steve Thomsen among others. I doubt if you did a full count of Sennholz students from Grove City College who pursued their Ph.D.s or became intellectuals in support of free-market and classical-liberal causes that any other teacher in his generation, or even today, would be responsible for even half the number he generated during his career.

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and its citizens. Unions do not just impede the labor market, but legal barriers that favor unions and thwart the freedom of contract introduce conflict into a market which otherwise would tend toward harmony of interests through voluntary choice. Debts and deficits do not just dissipate future productivity by crowding out private investment, they destroy the fiscal discipline required to keep government in check and ward off the entitlement mentality that is inherent to democratic processes and which brings with it social and racial conflict.

Dr. Sennholz makes these arguments in plain language with a minimal use of the jargon of professional economists. His audience is primarily the interested layman, not other economists. However, he does pepper his discourse with commentary on the work of other economists, in particular figures like John Maynard Keynes, A.C. Pigou, and Milton Friedman. His reference to the evolution of economic ideas within the economics profession is always in the context of his broader mission of exposing the popular misconceptions that underlie erroneous public policy. The economist's role, Dr. Sennholz insists, requires a courageous stance against the "putative guardians of the common good pointing in the wrong direction" (1979, p. vii).

The basic message that Dr. Sennholz attempted to convey to his readers was consistent from his first book to his most recent writings. To give an example, consider an extended excerpt from his first book, *How Can Europe Survive?*

> If all the world were interventionist, peaceful coexistence of sovereign nations would also be impossible. Government interference with the operation of the market economy favors certain producers to the detriment of other producers and consumers. This "favor" and "protection" usually takes the form of influencing and regulating prices, which in turn is based upon the restriction of imports and exports. Import and export restrictions, however, are measures of economic nationalism and cause international economic conflict. Inflationary policies together with arbitrary parity regulations bring about foreign exchange shortages, which in turn lead to further restrictions on foreign trade. Numerous other forms of government intervention and protection—restriction of competition and investment, control of quantity and quality of goods produced, supervision of the methods of production employed, taxation that consumes capital and drives liquid capital elsewhere, and protection of numerous trade and professional organizations—are either direct acts of economic nationalism or depend upon supplementary acts of economic nationalism. No matter how we may analyze the system of interventionism, its inherent international aspect is the disintegration of the division of labor. Each act of economic nationalism requires painful adjustments on the part of those countries that deal with the offending country. In the final analysis, the structure of production in all countries, interdependent through foreign trade, is forced to make adjustments because of a single act of economic nationalism. Only the system of individual liberty and the unhampered world economy can provide the enormous advantages of the international division of labor and provide the milieu for nations to live in peace. (1955, p. 31)

The theme of how one intervention begets another intervention that undermines the peaceful market order is repeated again and again in Dr. Sennholz's books, articles, and lectures. The imagery that he invoked in his lectures still rings in my ears 20 years later, e.g., he described the modern welfare state as a giant circle with all of us having our hands in the pockets of our neighbors. But Dr. Sennholz did not just effectively use rhetoric and imagery to excite young minds about economics and the political economy of a free society. As the above excerpt demonstrates, his analysis had a lasting relevance. What he wrote in 1955 is as relevant for us today as it was then. In the wake of the Asian crisis of 1998 many economists, most notably Joseph

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Stiglitz, called for the imposition of capital controls.[5] But as Dr. Sennholz points out, restrictive policy on capital consumes capital today and drives liquid capital elsewhere. Dr. Sennholz's argument also remains relevant (largely as a warning) to the contemporary formation of the European Union. Rather than create an environment of freedom of capital and labor throughout Europe, industrial special interest groups and labor unions utilize political power to maintain restrictions. But as Dr. Sennholz argued in the 1950s, the establishment of freedom of trade and movement of men and capital is the most important policy move that the people of Europe could adopt. Unification would be acceptable if the majority of Europeans were classical liberals in political inclination, but with the majority of Europeans leaning toward interventionism and socialism the promise of an economically unified Europe will go unfulfilled. Unification assumes free movement of labor, whereas the welfare state requires immigration laws and limiting labor supply to maintain wages above market clearing levels for privileged labor groups. Unification assumes that individual governments will abolish all barriers to entry from foreign competitors with domestic firms to ensure that these firms are constantly striving for cost minimization in production to compete effectively. The welfare state, on the other hand, raises the costs of doing business in order to ensure that security and social objectives are met. This means that domestic firms must be protected from foreign competitors otherwise their competitive position will be endangered. In short, the welfare state breeds protectionism. Unification presumes a stable currency, whereas the welfare state leads to credit expansion to finance social democratic policies. Unification requires free migration of capital, but the welfare state requires government control of capital investments and capital movements. As Dr. Sennholz argued, "It is obvious that the welfare state is incompatible with interstate unification, which requires the European nations to make a momentous decision. The must choose between government welfare and interstate unification. They cannot have both" (1955, p. 318).

In addition to his deployment of the economic analysis of interventionism and credit expansion, a consistent theme in Dr. Sennholz's writings is, as I have said above, that the moral element should not be forgotten. Only a change in private and public morality will result in the necessary changes. "Significant reforms," he argues, "in the final analysis, are moral reforms, changes in the perception of right conduct" (1987b, p. 163).

Conclusion

The economic "sermons" I was subjected to at Grove City College redirected my life. There is not a day that goes by that I don't remember fondly the style and substance of Dr. Sennholz's lectures. As a teacher of basic economics to hundreds of students each year, I borrow generously from those memories to try to convey the principles of economics and their implications for a free society. I am not as comfortable with introducing the moral element into the discussion in my classes, but I fundamentally believe Dr. Sennholz is right that lasting reform requires a change in morality. The difficulty within the transition economies over the past decade in establishing a free-market economy highlights the intricate institutional matrix required for a price system to function properly. Independent of even the transition experience, political economy in principle necessitates, at a certain level of analysis, the adoption of a moral stance (see Boettke 2001, pp. 7-28).

[5]Stiglitz won the Nobel Prize for Economic Science in 2001 for his contributions to information economics. However, he has become somewhat infamous in 2002 for publishing a book critical of recent globalization efforts and challenging market-oriented policy. See Stiglitz (2002).

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Dr. Sennholz, in my opinion, successfully blended his knowledge of the science of economics with a deep commitment to the moral principles governing a society of free and responsible individuals. It was this message that was conveyed clearly in his writings and lectures. To those students who were open, Dr. Sennholz's message was transformative. During the dark days of the twentieth century, when socialism had seemed to grab the higher moral ground, there remained a vital few who resisted that intellectual trend. Some of them devoted their energies to pure scholarship—Nobel Prize winners, such as F. A. Hayek, Milton Friedman, George Stigler, James Buchanan, Ronald Coase, and Douglass North pushed economics in new directions and provided new ammunition for the defense of the free-market economy. Some among these, notably Milton Friedman, also rose to celebrity status as public intellectuals. Others such as Murray Rothbard pursued a mixed strategy of scholarship and political activism, while Israel Kirzner attempted to create a purely academic Austrian movement. But as the history of the Austrian School in the mid- to late-twentieth century is written, the contributions of Dr. Hans Sennholz as a teacher and popular writer must be accounted for as well. He provided scores of young people with the opportunity to learn the teachings of the Austrian School of economics at a time when Mises's name was no longer recognized by economists. From his position at a rural liberal arts college in Pennsylvania, Dr. Sennholz conveyed in a consistent and forceful manner the principles of freedom and free enterprise for over 30 years.

Congratulations to Dr. Sennholz on this occasion of his eightieth birthday.

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Do Free-Market Economists Practice What They Teach?

Sanford Ikeda

This short piece on methodology concerns the extent to which the knowledge assumptions of the economics employed by free-market critics of public policy logically permits any meaningful critiquing of government intervention to take place at all.[1] I apply this question first to those who generally employ a perfect-information-based economics, which I argue, in this case, gives rise to a contradiction between theory and empirical application. The elimination of this contradiction, I maintain, is accomplished most fruitfully when the underlying economic theory allows for the possibility of genuine human error to occur. Admitting this possibility, however, itself appears to give rise to a paradox, which I attempt to resolve by using what that more apposite economic theory teaches us about the nature of the market process.

A Contradiction

In the nineteenth century, Bishop Whately labeled economics "the dismal science" for the propensity of economists to tell people what was not possible or what they could not do. Economists still do this, and indeed it is one of their most important jobs. You cannot, for example, inflate the currency to stimulate short-term output without sowing the seeds of long-term malinvestment and social disruption; you cannot impose a minimum wage without chronically pricing the least-skilled and most vulnerable workers out of the labor market; and you cannot erect trade barriers to protect domestic import-competing industries without at the same time undermining the foreign demand for domestic exports.[2] You cannot, in short, violate economic principles any more than you can run in two directions at once.

How useful this dismal task is would seem to depend on the degree to which people actually make mistakes. Obviously, if no one errs persistently there is no

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[1]It takes up a theme discussed in Kirzner (1979b).

[2]Excellent examples of politico-economic analyses of this kind can be found in Sennholz (1955) and (1979).

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opportunity for anyone to suggest a more correct or appropriate path. Only when a pattern of genuine errors occurs is it even possible to offer useful economic advice.

Now, in standard economic theory, for purposes of modeling decisions that take place in the market, the presumption is that human actors possess the optimal amount of information. When faced with a problem, such as whether to take a job or continue formal education, standard microeconomics presumes that an actor will spend resources in learning about the problem until the cost and benefit of an additional unit of information are equated. Becoming informed beyond that point would add more to his cost than his benefit and would therefore be against his self-interest. Because modeling an actor's choice when he is unaware of all the expected benefits and costs poses profound problems ("Do the marginal curves cross? If so, where?"), standard economic theory side-steps the problem by assuming that all choosers know at least the expected values of the marginal benefits and costs. In this set-up, a rational actor thus chooses to forgo information that he could have learned but for the expected cost. This kind of ignorance, a concept associated with the work of economist George Stigler, is often referred to as *rational ignorance* or ignorance by choice.

So, ignorance that is not by choice, ignorance pure and simple, is ruled out by the nostrum of standard microeconomics, in particular by the assumption of "perfect knowledge." This means that the actor, in assessing the marginal costs and benefits of working versus formal education, not only seeks to act in his own interest as he sees it, but that he knows all relevant alternatives and can anticipate their consequences. If he chooses not to know something, in a real sense he still knows what he is missing. This leaves no room for any *ex post* regret. All ignorance in the perfect-knowledge approach of standard microeconomics, the economics that many free-market advocates explicitly rely on, is therefore rational ignorance.

This means, however, that if people persist in doing something that the economist himself typically regards as foolish or irrational, and if it is assumed that they possess the optimal amount of knowledge, then their actions, strange or wrong though they may appear, are not really foolish or irrational at all. The presumption would have to be that the cost of adjusting to a more "rational" form of action, one more agreeable to the economist, is too high. All action would be rational in the sense of not only being in the interest of the actor but also of being the best possible course in light of all relevant information.

Now here is the rub: Why is it frequently the case that many economists, even those whose background is only in this sort of standard microeconomics, are also advocates of the free market and critics of government intervention? If people do in fact have the optimal amount of information, and if they do persist in supporting such things as inflation, minimum-wages laws, and protectionism, logical consistency with the underlying theory would dictate that pointing out the "fallacies" and "errors" would be useless and a waste of valuable resources. There would be little that such persons could learn from economists beyond what they have already chosen to know. They are not fallacies or errors from their viewpoint even if in a real sense they suspect that their beliefs are "wrong," because they would have already decided that the benefit of convincing themselves they are wrong would exceed the cost of doing so.

Moreover, if economists were as perfectly rational as the agents they assume to be modeling, and consistency would seem to dictate this too, they should already be perfectly aware of the above argument and should therefore not even consider advising and critiquing anyone, anywhere, anytime. But they do! Thus, if they really think there is a possibility of their doing some good by offering information to *public choosers* (i.e., those responsible for making decisions about public policy), this is an admission, at least a tacit one, that the perfect-knowledge-based economic theory they teach in

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their classrooms is fundamentally at odds with their desire to offer public-policy advice to systematically change how the world works.

Removing the Contradiction

To eliminate the contradiction between economic theory and the justification for its application, some aspect of the economist's theoretical understanding of how the world works must admit of something more than rational ignorance. There must be in other words a kind of ignorance that is not the result of deliberate choice, but is rather in the nature of sheer or *radical ignorance*.[3] This sort of ignorance would go beyond simply not knowing something, but would entail not even knowing that you do not know it.[4] I am ignorant by choice of the contents of some of the books on my library shelf because I have judged the cost of reading them (for now) to be higher than the benefit,[5] but I am radically ignorant of books that I do not even know to exist.

Radical ignorance in fact gives character to the world that we actually know, in which regret and surprise, error and discovery are the foundations of profits and losses, success and failure. This is because with the possibility of radical ignorance comes the possibility of genuine error. It is only when I might not know something that is in my interest to know, where the benefit does indeed outweigh the cost, that my actions might correctly be characterized as erroneous.[6] Not realizing that I could have purchased at a lower price than I did, when the cost of discovering this fact is zero, is certainly an error and grounds for regret.

Just as important, however, is that with genuine error comes the opportunity for genuine learning. That is, with genuine error comes the possibility for public choosers (or anyone else) to learn something that is in their interest to learn. So, discovering the lower price before buying would constitute a pleasant surprise. Acknowledging the existence of radical ignorance within one's theoretical framework thus leaves room for both error and the discovery of error.

Uncovering a Paradox

But this in turn seems to lead to an *apparent* contradiction—a paradox. To reiterate, the dismal economist is evidently doing his job when he helps the public see the bad consequences of various kinds of policy. Given enough sound instruction, public choosers of goodwill are supposed to be able to trace these bad consequences back to particular actions or set of actions. Once they are made aware of these consequences, which frustrate their original intentions, they are in a position to correct their previous errors. (Of course, if they are ill-willed to begin with, if malice and not mistakes informs their actions, lessons in ethics might be more appropriate, though perhaps no more effective, than instruction in economics.) Yet one of the important things that an economics based on the possibility of radical ignorance teaches us—the economics that follows in the tradition of Carl Menger, Ludwig von Mises, and Friedrich Hayek—is that

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[3]This concept is developed extensively by Israel Kirzner (1979c).

[4]It is possible that it also entails "not even knowing that you don't know that you don't know that you don't know...," *ad infinitum*, so that we might speak of there being degrees of radical ignorance. Not knowing that you do not know, however, is sufficiently radically ignorant to drive the point being made here.

[5]Of course, I might very well discover upon reading it that the contents were quite different from what I thought they would be. Indeed that is why we read books.

[6]Erroneous, but still rational in the sense of being purposeful. See Mises (1966, p. 19).

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for every action we take there will always be consequences, many of which may impinge on our plans, that no one could have foreseen. Because our knowledge is not perfect, we are going to be aware of only a fraction of the consequences of each of our actions even if it is in our interest to know all or most of them.

This goes for all human actors, including, of course, economists. Radical ignorance appears to stand as an impenetrable veil against the future ramifications of present action. But if we acknowledge the existence of radical ignorance, and this means that important consequences of any action, by government authorities or private individuals, will be unknown, then how in good conscience can we as economists wag our fingers at government intervention? How can we know that the policy of limited intervention in the market process has the kind of negative unintended consequences *in comparison* to the market process? That is to say, if error infuses action in all social spheres, whether public or private, why should economists not be limited to simply saying, in effect, "I don't know what's going to happen? Just be careful"? Where do we get the idea of criticizing such policies as rent control or credit expansion, without having just as much enthusiasm to criticize entrepreneur-capitalists for investing in projects many of whose long-term effects no one can foresee?

Resolution

In the private sector, however, the negative consequences of erroneous actions tend to be corrected through the pressures of competition and self-interest as long as certain market institutions are in place. That is, if property rights are well defined, if an effective system of contractual enforcement operates, and if there are appropriate norms of trust and reciprocity, the results of actions taken today will tend to fit within an order that emerges, unplanned, moment-to-moment (Hayek 1967). In the market process, success is determined by how well you are able to anticipate and respond to change, and the system of relative prices that forms within the market process constitutes the essential tool for facilitating such adjustments and promoting spontaneous plan coordination. If you do not make a better or cheaper mousetrap you will go out of business, if your actions harm innocent third parties you could be subject to legal action, and if you cheat your customers you will lose their trust and could be sued. As Mises and Hayek explained long ago, in the context of these market institutions, the price system is able to adjust from continuously to the ever-changing expectations and valuations of myriads of actors following their own self-interest. Mistakes are punished with losses just as profits are the reward for making right decisions.

This means, however, that economists should not say (though some do), "If you invest in such-and-so, you will get rich," because the future that results from the complex interaction of millions of choices today cannot be known with certainty. But what sound economics allows them to say with complete confidence, though at a higher level of generality, is that within the market process incentives exist to drive spontaneous entrepreneurial forces to correct the errors that radical ignorance generates. It permits them, moreover, to point out when government policies hamper the operation of this error-correction process—as indeed in the cases of inflation, price regulation, and protectionism. Though this process never operates with perfection, it is the sort of continuous, systematic adjustment that the governmental process—even with voting, exit, and voice—is incapable of producing. The monopolistic character of governmental bureaucracy also contributes to the sluggishness, especially as the scope of its activity grows in relation to the market.[7]

[7]For a discussion of this view and a summary of the nature of the "governmental process," see Ikeda (1997, chap. 3).

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Conclusion

There is then a fundamental inconsistency between theory and application for political economists who both rely on standard microeconomics for their support of the free market and scorn government intervention. Theory matters in free-market critiques of public policy. It matters, however, not only in determining the content of those critiques, but also, from a methodological standpoint, in the sense of whether the world-view presupposed by theory is one that leaves room for any meaningful critique to take place at all.

It should not be news that the authorities in charge of public policy are ignorant. Surprisingly, if we start from the presumptions of perfect-knowledge economics we would be logically led to conclude that those authorities indeed never make mistakes, or if they do that it must have been planned that way all along. Fortunately, political economists working in the Austrian tradition are, as they have been since Böhm-Bawerk's and Mises's devastating critiques of Marxian economics and socialism, free from having to maintain this curious point of view.

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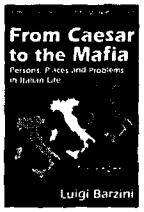

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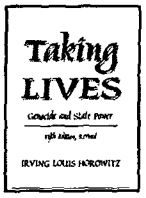

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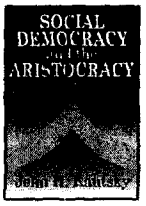

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THE 1866 FALSE-MONEY DEBATE IN THE *JOURNAL DES ECONOMISTES*: DÉJÀ VU FOR AUSTRIANS?

OSKARI JUURIKKALA

After the 1815 Restoration, there emerged in France an influential group of economists under the inspiration of Jean-Baptiste Say advocating free trade and laissez-faire.[1] The movement came to fruition in the Société d'Economie Politique, which was founded in 1842. That same year the first ever scholarly journal in economics was launched, the *Journal des Economistes*.

In the first half of the nineteenth century, the French banking system was backward, undeveloped, and strictly centralized around the Bank of France, created in 1800. Government dictated interest rates, and entry into the banking industry was severely restricted (Smith 1990, pp. 28-41). The laissez-faire school was of course very critical of this system. The attack against monopolistic central banking was led by economist Jean Gustave Courcelle-Seneuil,[2] who advocated unrestricted freedom of banking and of note issue.[3]

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[1]For more on the French laissez-faire school, see Rothbard (1995, pp. 441ff.) and also Schumpeter (1961, pp. 490-500). The school strongly influenced such important figures as Jevons and Hearn in England, and Ferrara and Pareto in Italy. It also inspired the hard-money movement in the United States. See Rothbard (1995, p. 448 ff.) and Salerno (1988).

[2]Jean Gustave Courcelle-Seneuil, 1813-1892, was a journalist, businessman, and professor of political economy at the University of Santiago, Chile, in 1852-1862 (Blaug and Sturges 1983).

[3]Courcelle-Seneuil (1853, 1867). See also Rothbard (1995, pp. 267) and Smith (1990, p. 93-94). Courcelle-Seneuil was instrumental in turning the Chilean banking legislation to fractional reserve banking in the 1860s. Prior to that, Chile had been a haven of monetary stability with 100-percent commodity money and no central bank. The free-banking legislation of our "foreign expert" brought in an accelerating inflation, and the brave new free- banking system collapsed in less than five years. Moreover, this period led to close cooperation between banking and political elite and ultimately to the creation of a full-fledged central banking system in Chile. See Rothbard (1989) and Hirschman (1963, pp. 159-75). Selgin (1990) has defended Courcelle-Seneuil, arguing that the cause behind the crisis was government intervention, not fractional reserves.

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Courcelle-Seneuil's free-banking conclusions did not convince all French liberals. Henri Cernuschi[4] presented a different interpretation in two tracts written in 1865. Cernuschi (1865, 1866) held that "the vital question was not one of whether the note issue should be in the hands of a few or of many banks, but whether bank notes should be issued at all."[5]

Victor Modeste[6] had already anticipated the latter view in an unpublished article written in 1864. In 1866, the *Journal des Economistes* published two of Modeste's articles which argued that all bank notes in excess of commodity reserves were inflationary and equal to plain "false money." Writing this, he not only attacked the government monopoly but maintained that the term "false money" should be used on privately issued fiduciary media as well (Modeste 1866 a,b).[7] This was a frontal attack against the free bankers led by Courcelle-Seneuil, and it started the heated though short-lived false-money debate of 1866 in the *Journal des Economistes*. The eminent Courcelle-Seneuil (1866) formed with Gustave du Puynode (1866a,b)[8] and Théodore Mannequin (1866)[9] the fractional reserve front against Modeste.

The earlier British banking debates had dealt with similar issues, but there was also an important difference. Both British schools, currency and banking, were inclined to opt for central banking as a solution to the problems they identified.[10] In the French false-money debate of 1866, the terms were different; both sides agreed that central banking was the last thing that was needed. The debate was therefore the first time that uncompromising critiques of central banking clashed on this vital question of bank note issue.[11]

The present paper addresses three problems. First, the 1866 debate closely resembles the present-day Austrian debate on the banking system of a free society: there was

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[4]Henri Cernuschi, 1821-1896, was a businessman and politician from Milan. In 1850, he went to France to become a director of the Bank of France (Columbia 2001).

[5]Cernuschi quoted from Smith (1990, p. 105). See also Rothbard (1995, p. 268).

[6]Unfortunately very little is known of the details of Victor Modeste's life and career.

[7]Modeste had already offered the first article to the journal in April 1864, but the editors had turned it down. The editor explains (Modeste 1866a, p. 181) that it was now given a new chance because of the very appearance of Cernuschi's works.

[8]Michel Gustave Partounau du Puynode, b. 1817.

[9]Details of the life and career of Théodore Mannequin are not well known.

[10]For a detailed discussion of the British money and banking debates, see for example Hayek (1991, chap. 12) and Rothbard (1995, chaps. 5-7). The centralist tendency is claimed in Rothbard (1995, p. 252), Smith (1990, pp. 71ff. and 132), and Huerta de Soto (1988b, p. 497). For this reason, the British sides are often classified as the central banking and central currency schools. The French liberals have been called the free banking (Courcelle-Seneuil et al.) and the free currency (Cernuschi et al.) schools. There was also a German currency school in the 1850s, the most notable members being Geyer (1865), Hübner (1853-1954), and Tellkampf (1867). Even they, however, were eager to adopt the central banking solution, according to Rothbard (1995, pp. 269-70).

[11]Huerta de Soto (1998b, p. 498) has indeed claimed that Cernuschi and Modeste were the first ones to argue pro-free banking and anti-fiduciary media. Cernuschi and Modeste did not have much support though. As the criticism of the banking system grew stronger, the Senate required in 1865-1866 that a systematic report be prepared to address the problem. The June 1866 report was strongly in favor of the Bank of France, however, most of the enthusiasm had died down by that time (Smith 1990, p. 40). Moreover, the laissez-faire school was already losing its authority, and was soon to be supplanted by socialist, historicist, and institutionalist doctrines. On the decline and later neglect of the French liberal tradition, see Rothbard (1995, pp. 470-71) and esp. Salerno (2001).

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a distinct fractional-reserve side and similarly a vigorous 100-percent side. To what extent can there be found parallels between the French and the Austrian debates?[12] Second, we concentrate especially on the two articles by Victor Modeste. Despite his small academic output, could he be seen as a predecessor to the Austrian 100-percent school? Third, insofar as Modeste has been noticed at all, he has usually been rather one-sidedly associated with Cernuschi. As Selgin expressed it: "Mises's support for free banking is based in part on his agreement with Cernuschi, who (along with Modeste) believed that freedom of note issue would automatically lead to 100-percent reserve banking." But did Cernuschi and Modeste go together the whole way? If not, could Modeste perhaps be better seen as a forerunner to Murray Rothbard?[13]

The false-money debate of 1866 has gone largely unnoticed by historians of thought. Blaug (1997), Schumpeter (1961), and Spiegel (1991) have not studied it, and Rothbard's treatment of it is only cursory.[14] We will go into the 1866 debate in more detail using the original journals. Translations from the French are mine unless otherwise noted. Also when referring to the works of Say and other French liberals of the nineteenth century, we have mainly used original editions.

The 1866 False-Money Debate

Money and Money Substitutes

Modeste's argument against fiduciary media was based on analytical distinctions between different types of media of exchange. He followed the reasoning of Jean-Baptiste Say (1964, p.p. 217 ff.) in order to explain how money properly originates in barter. Without money, trading is difficult and costly and can require a number of separate exchanges before the ultimate goal is reached. The remedy to this problem of a "double-coincidence of wants" was a common medium of exchange (Modeste 1866b, p. 86).[15] But this was only the first step, according to Modeste; a second one could also be taken. The transportation of metallic currency does, after all, generate unnecessary costs as well. Modeste noted two remedies for this problem: clearing operations and, more important, money representatives or substitutes. However, in order for the money substitutes to remain genuine money, they have to be backed by actual property—the original money commodity that emerged on the market. "Is it not true again that, in order for the paper to move and operate as a representation . . . of money, the money has to exist?"

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[12]On the present-day fractional-reserve side see, for example, Dowd (1993), Selgin (1988, 1996), White (1989, 1999), and Selgin and White (1996). One-hundred-percent-reserve arguments are more recently developed in Block (1988), Hoppe (1994), Hoppe et al. (1998), Hülsmann (1996), and Huerta de Soto (1995; 1998a,b).

[13]Selgin (1988, p. 62). His view is based on Smith (1990, p. 105), who indeed only notes that the "same attitude [as Cernuschi's] towards the bank notes was taken up by Modeste." Neither does Huerta de Soto (1998b, p. 498) differentiate between the two. Only Rothbard (1995, pp. 268-69) presents a brief analysis of Modeste's policy conclusions. On Rothbard's views, see Rothbard (1983, 1990, and 1991).

[14]Rothbard does not really comment on the debate but on the French laissez-faire banking views in general (1995, p. 266-69). Interestingly, Rothbard does refer to the 1866 debate in his bibliographical essay (p. 491), but he only describes it as a "fascinating debate among the French laissez-faire thinkers on how to apply libertarian principles to the vexed question of banking."

[15]Frédéric Bastiat (1979, p. 123) also explained this very clearly in 1850.

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Real Money and False Money

Different metallic commodities are not of similar value, however. This makes it possible to counterfeit money, for example, debasement of gold coins by mixing gold with copper or some other less valuable metal, yet representing them as genuine gold coins. These belong to the category of *false money.*

Modeste (1866a, p. 182; emphasis in original) used an interesting definition in distinguishing between real and false money: "*Real money is the one whose value as commodity is equal to its value as money.*" He pointed to the fact that the basis of the value of money is the value of the money commodity. In fact, the very name of the French monetary unit, *franc*, was originally a measure of weight, 3447.74 francs equaling a fine kilogram of gold. False money, on the other hand, is different: "What is *false* money?—*It is money whose commodity value is smaller than its monetary value*" (p. 184; emphasis in original).

What are the effects of false money? Obviously, and most important, the counterfeiter of the false-money benefits. He has transformed something less valuable into something more valuable, if others mistakenly accept it as money (p. 185). This money, however, increases the quantity of money in the economy and ultimately leads to increased prices and a decreased value of money. As money (in a broader sense) thus becomes undervalued, part of the real money is exported outside the country, where it still has a higher value (p. 186).[16] This process, described by Gresham's Law, requires that false money be accepted at par with real money.[17]

The concept of false money can be found earlier in Frédéric Bastiat, Michel Chevalier,[18] and Gustave de Molinari.[19] Bastiat called the "draft on the Bank of Exchange" a "deceitful substitute," and described paper money as "fictitious money." He concluded that "all the reasoning which can be made in favor of paper money has been made in favor of legal false-coined money."[20]

Bank Notes and Fiduciary Media

If for most French liberals the main enemy had been the government monopoly in banking, Modeste wanted to take the case even further. The point was that bank notes without reserve backing were always false money—they were fraudulent *irrespective* of whether there was a government monopoly or not.

Modeste approached this argument by first discussing different types of banking activity, following the typology developed by J.B. Say (1964, pp. 268-72). He was especially interested in a type called bank of issue (*banque d'émission*), or fractional

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[16]Modeste, however, used the common nineteenth-century French definition of money as a "measure of value." Mises (1981, p. 51) refutes this concept, saying that "to speak of money as a measure of value . . . is entirely fallacious."

[17]Free bankers today argue for option clauses as a solution to the contractual problems of fiduciary media. This would however make them trade at discount to money certificates if they circulated at all. On option clauses, see for example, Shah (1997).

[18]Michel Chevalier, 1806-1879, was a liberal economist and a professor at the Collège de France, 1840-1879 (Blaug and Sturges 1983).

[19]Gustave de Molinari, 1819-1912, was a Belgian-born journalist, leader of the French laissez-faire school and editor of the *Journal des Economistes*, 1881-1909 (Hart 1981).

[20]This was in Bastiat's article "Maudit Argent" ([1849] 1877, pp. 175, 188 and 206), originally published in the *Journal des Economistes* in April 1849. On Chevalier, see his entry "Monnaie" in the *Dictionnaire de l'Économie Politique.* Molinari's concept of false money as governmental counterfeiting appears in Molinari (1849). I would like to thank Antoine Gentier and Philippe Nataf for bringing these to my attention.

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reserve banking.[21] This should be clearly distinguished from loan banking (*banque d'escompte*) and deposit banking (*banque de dépôt*). Modeste (1866a, p. 181) explained that insofar as a bank issues notes but maintains a corresponding reserve of metallic money in its vaults, it is a genuine deposit bank. It becomes a bank of issue when it issues notes without reserve backing.

The concept of false money and the analysis of different banking activities were both common for the French liberals.[22] Modeste only integrated these two elements. He was bound to somewhat contradict his own definition of real money, since according to it, only the money commodity should be called real money. This may have confused his opponents, but what he came up with was an important discovery and the core of his attack on fiduciary media.

Exchange can be done with money representatives, that is, titles to money proper; however, not all bank notes represent real money. Modeste (1866a, p. 186) thus distinguished between what present-day Austrians would call money certificates and fiduciary media–bank notes with or without specie backing respectively.[23] He concluded that money certificates are real-money substitutes. Issuing this type of bank notes does not bring about additional money to the economy; the note only represents the actual money in the bank. Fiduciary media, on the other hand, are not money substitutes at all according to Modeste (1866a, p. 188; emphasis in original): "Is the note real money?–Let us remember that *real money is the one whose value as commodity equals to its value as money.*–The answer is given."

In the legal terminology of the time, money referred to the metallic money proper. Modeste, however, realized that the economic use of certain goods does not depend on the language of jurisprudence. He strongly concluded: "The bank note of issue is used as money.–It is not a value *sui generis* [by itself].–It is money–it is false money–it has all the characteristics and all the economic effects of false money" (p. 207).

Fractional-Reserve Free-Bankers' Reply

Modeste's claim that fiduciary bank notes were inherently fraudulent was an open attack on the free-banking doctrine of Courcelle-Seneuil. The idea of Courcelle-Seneuil (1853, p. 322) was simple. In an earlier article on paper money, he openly acknowledged the negative consequences of unrestricted government note issue. He argued, however, that there would be no problem whatsoever if all restrictions on banking were abolished. The modern defenders of free banking with fractional reserves present very similar claims, often comparing historical statistics of banking crises in "free" versus "unfree" banking systems (White 1984, esp. p. 48; Selgin 1966, pp. 196-67).

Replying to Modeste's article in the *Journal des Economistes*, du Puynode and Courcelle-Seneuil argued that bank notes are not really money at all. This was the core of their defense.[24] Courcelle-Seneuil (1866, p. 342) did not agree with the distinction

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[21]The definition of *banque d'émission* (bank of issue) corresponds to what contemporary Austrians would call fractional reserve banking. Similarly, the concept of *le billet des banques d'émission* (bank note of issue) corresponds to the concept of fiduciary media. On these and other conceptual distinctions in present-day Misesian literature, see for example, Rothbard (1993, pp. 700-03).

[22]The typology and analysis of banking can also be found in Coquelin's entry on "Banque" in the *Dictionnaire de l'Économie Politique* (1852-53, pp. 107-45), as well as in Courcelle-Seneuil (1867).

[23]On the Austrian definitions, see esp. Mises (1998, pp. 429-31).

[24]Puynode (1866a,b) entitled his articles "The Bank Note Is Neither Money Nor False Money."

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between fractional reserve banking and genuine deposit banking. He stressed that bank notes are always merely promises to pay a certain amount of money proper:

> Is this note money? No. It is a promise to pay in real money a given sum. Thus, in so far as the contract is executed, the note cannot by itself serve as a measure of values even if it is accepted as such. The measure is the metallic money. (Puynode 1866b, p. 262)

If fiduciary media are not money, what exactly are they? According to Courcelle-Seneuil and du Puynode, they are simply *credit*. As du Puynode put it, "the bank note, issued on top of reserves or not, is a pure engagement, a simple promise, like the check, . . . like the bill of exchange."[25] Courcelle-Seneuil (1866, p. 348) maintained that in this function, they are very important for industry, and issuing them is neither dangerous nor dishonest.

Present-day free bankers similarly criticize the distinction between time liabilities and demand deposits. According to Selgin (1988, p. 62): "Holders of demand liabilities are granters of credit just as are holders of time liabilities." They therefore hold that "the common definition . . . of a 'bank deposit' is . . . that of a *debt claim* against the bank and not a warehouse receipt." To be sure, Selgin (1988, p. 62) and White (1996, pp. 88-89) do not deny the money-nature of fiduciary media because they follow the subjectivist definition of money.[26] Courcelle-Seneuil, on the other hand, adopted a definition according to which money is simply metallic money.

Redeemability of Bank Notes

Let us then think that bank notes are essentially promises to pay in metallic money on par and on demand. How could this be possible under fractional reserve banking? How could all notes be redeemed, should the note holders happen to demand the redemption at the same time?

Courcelle-Seneuil (1866, p. 192) replied by saying simply that this is not a problem because banks never have to redeem their notes at the same time. Present-day fractional-reserve free bankers also downplay this problem, arguing that "a free banking system would . . . be relatively immune to systemic crises" (Selgin 1996, p. 9).[27] Modeste (1866a, p. 192), however, wittily noted the circularity of Courcelle-Seneuil's reasoning: "What a curious convertibility that exists only insofar as no conversion is demanded!"

Resource-Cost Savings

Another fractional-reserve free banker, Théodore Mannequin (1866, pp. 403-04), joined the debate and brought in the Smith-Ricardian argument that fiduciary media would render possible the nonmonetary use of part of the money commodity. Modern advocates of fractional reserves similarly use this argument of resource cost savings.[28] Mannequin (p. 404 n), however, added interestingly that, under the present system of privileged banks, this advantage would only benefit the owners of the banks, not their customers.

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[25]On the classification of the bill of exchange as a credit instrument, see for example Rothbard (1993, pp. 723-24).

[26]On the subjectivist definition and identification of money, see esp. White (1989, chap. 11).

[27]On the other hand, they implicitly admit the problem by advocating "option clauses" as "a potentially important form of protection for banks that have redeemable liabilities and operate on a fractional reserve" (Dowd 1993, pp. 41 ff.).

[28]See, for example, Selgin and White (1996, pp. 98-99).

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Modeste (1866b, p. 81) pointed out that simply creating false property titles could not possibly increase the actual property. He argued that the advocates of fiduciary media ultimately wanted to substitute a paper money for metallic money, but their attempts were contradictory. On the one hand, they wanted to suppress the value of the money commodity by substituting mere paper for it. On the other hand, they wanted the commodity to maintain its value so that it could be used as the basis of the value of paper notes.[29]

Michel Chevalier had earlier attacked the fiat money doctrines and government paper-money dreams in his 1853 article in the *Dictionnaire de l'Économie Politique*. He pointed out that much of the reasoning is based on the curious yet prevalent idea that money is only a sign representing wealth (*signe représentatif*) and not wealth in itself. If money indeed is not real wealth, why not simply go all the way and use mere paper tickets instead of valuable metals (Chevalier 1853, pp. 201-02)?

Effects of Fiduciary Media: Illusion and Error

If fiduciary media are akin to false money, they have the effects of false money: they benefit the issuer of the false money and depreciate the value of real money. Yet what are the broader effects of fiduciary media on the economy?

According to Courcelle-Seneuil, bank notes are not money after all; they are promises, or credit. Thus, they do not affect the value of money but only increase the amount of available credit in the economy. Courcelle-Seneuil admitted that it is the banks that profit from issuing fiduciary notes, but this would be for the benefit of the whole economy "because the banks do not borrow in order to consume but to save." He argued that the additional banking profits would stimulate the economy and ultimately benefit the consumers as well (Courcelle-Seneuil 1866, p. 346). Present-day defenders of fractional reserves argue on surprisingly similar lines:

> Benefits accrue to bank depositors and noteholders, who receive interest and services paid for by the extra bank revenue generated from lending out a portion of its liabilities. Benefits accrue . . . to everyone who works with the economy's consequently larger stock of capital equipment. (Selgin and White 1996, p. 94)[30]

Modeste well understood that the issuing of fiduciary media created a boom in the economy. He argued, however, that the prosperity brought by fiduciary media was only illusory and would inevitably collapse in a crisis. Bank notes cannot create new capital. The "prosperity" does not rest on anything real, but is simply created out of thin air, or, in other words, it is "riches fallen from the sky" (Modeste 1866a, p. 198). In his brief discussion on business cycles, Modeste followed the money-based analysis set forth earlier by Richard Cantillon[31] and Say, stressing that issuing fiduciary media brings about an illusion in the economy (pp. 199-205).[32]

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[29]To be sure, this sort of paper-money dream was very different from that of the twentieth-century fiat-money advocates such as Milton Friedman (1953). They explicitly reject the need for gold or any other commodity to function as the basis of the value of money.

[30]Selgin (1990, p. 5) has in fact argued in favor of the 1866-1874 period of free banking in Chile on these grounds. According to him, it was an "era of remarkable growth and progress" during which "Chile's railroad and telegraph systems were developed, the port of Valparaiso was enlarged and improved, and fiscal reserves increased by one-quarter." However, Huerta de Soto (1998b, p. 549n) has replied that all of this is not evidence of increased real wealth but rather of an illusionary boom induced by fiduciary media.

[31]Richard Cantillon, 1680-1734, born in Ireland, made an influential career as a banker and economist in France (Blaug and Sturges 1983).

[32]On Cantillon's business cycle theory, see (Cantillon 1959) and the summary in Hülsmann

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The cycle starts when the expansion of fiduciary media creates an illusive sense of prosperity. Spending increases and anticipations about the future become highly optimistic (p. 200). Increased spending raises prices and depreciates the value of money. This may be ignored at first, but the prices will keep on climbing. The error eventually begins to manifest itself: people have spent in excess of their sustainable capability. Businesses search in vain for additional credit, but nobody offers it (pp. 203-04).

As domestic prices rise, imports go up and money is increasingly exported from the country. This forces the banks to redeem their notes. But will they be able to do so? Soon all banks come under suspicion; panic arises and generates a run on banks. Now the fraud becomes apparent. Bank notes must be liquidated, the supply of money falls rapidly, and the value of money rises again. The illusion ends and the economy is forced to return to reality (p. 204).[33]

Positivist vs. Essentialist Methodology

An interesting topic of the debate was the question of proper methodology. Although the writers addressed this subject only briefly, it became apparent that they represented two opposite methodological extremes. The free bankers, du Puynode especially, stressed the importance of experience and believed that economics must be based on the experimental method of physical sciences. Du Puynode seemed quite frankly to despise all kinds of essentialist-analytical reasoning, and therefore argued primarily on grounds that the very existence of fractional reserve banks proved their superiority. Falling into the positivist *post-hoc-ergo-propter-hoc* fallacy, du Puynode maintained that fractional reserve banking has developed hand in hand with the development of industry, and that there could not be rich and industrialized countries without the expansion of fiduciary media (Puynode 1866b, p. 264). He took his position so far as to claim that analyzing the nature of different forms of money and of banking was nothing but meaningless and misleading casuistry (p. 265).

Modeste (1866b, p. 85) had a different idea of empirical research. He argued that empirical research should deal not with particular historical events but with the essence of the objects concerned. He replied that du Puynode's claims regarding economic history confused fundamental facts. No one contested the utility of loan banking and of deposit banking, but the third case was different. Fiduciary media created a sense of prosperity, and the key question was whether this ended up in economic crises or not (p. 80).

Ethics of Banking

Just as the two sides relied on opposite methodological approaches, they similarly founded their positions on opposite ethics. The ultimate question of the debate was whether fractional reserve banking was a legitimate form of business. For the French free-bankers, the choice was between freedom and nonfreedom. Du Puynode (1866b, p. 265) maintained that free banking was similar to free trade: a sacred right that should not be questioned. This is also the heart of the modern case for fractional-reserve free banking. Fractional reserves must be beneficial because "depositors continue to patronize these banks, demonstrating their preference for them." After all, "fractional-reserve banking has never been compulsory." Selgin and White (1966, pp.

(2001, p. 701-02). See also Say (1852, pp. 471-79). This idea is further developed in a recent interpretation of the Austrian theory, which maintains that business cycles are essentially cycles of error, caused by an illusion of increased prosperity that fiduciary media generate. See esp. Hülsmann (1998).

[33]Courcelle-Seneuil did not follow this theory but was instead "heavily influenced by James Wilson's circulation into fixed capital analysis of the boom" (Rothbard 1995, p. 267).

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95, 97, and 105) conclude that freedom to use fiduciary media "is preferable . . . to a system . . . where the law restricts money-users from holding any or some types of fiduciary media."

Modeste, on the other hand, did not begin with laissez-faire as such. What mattered was the nature and morality of the actions concerned. Freedom correctly understood did not mean the right to lie or to deceive. "The question is to know whether what is accepted is economic value; whether the engagement . . . is economically solid, its promise economically realizable." Thus we return to analyzing the characters and abilities of fiduciary media, and the answer is clear (Modeste 1866b, p. 84).

To be sure, Modeste was not an apologist for the central banking system. But instead of grounding his political philosophy on the vague idea of freedom, he advocated the principle of *self-government.* He was particularly clear on the nature of the State: "What we call the State, it is the master, the hindrance, the obstacle, the enemy" (Modeste 1866b, p. 76).[34]

Solution to the Note-Issue Problem

We have noted earlier that Henri Cernuschi is known as one of the first thinkers to propose unrestricted freedom of banking as a solution to the problem of fiduciary media. To be sure, he advocated free banking for exactly the opposite reasons that Courcelle-Seneuil did. Cernuschi believed that free note issue would result in fiduciary media losing their credibility: "I believe that what is called freedom of banking would result in a total suppression of bank notes in France. I want to give everybody the right to issue bank notes so that nobody should take any bank notes any longer" (Cernuschi 1866, p. 55, quoted in Mises 1998, p. 443). This idea is essentially the same as in Mises: "Freedom in the issuance of bank notes would have narrowed down the use of bank notes considerably if it had not entirely suppressed it" (Mises 1998, p. 446).

Did Modeste agree with this conclusion? It appears that he did not. Modeste (1866b, p. 75) was, to the contrary, highly skeptical of bankers and of the likely results of such schemes.[35] Moreover, if fractional reserve banking was fraudulent business, why should it be allowed at all? Modeste argued that the right to issue fiduciary media was a special legal privilege in the first place: "To depreciate, . . . to falsify . . . the money . . . [are] privileges of banks. This *privilege* is sold to them by the government" (Modeste 1866a, p. 211).[36]

Modeste came up with a different proposal. He realized that we do not have to choose between the free-fractional reserve banking system and the 100-percent central banking system. Fiduciary media were false money. Fractional reserve banking was a

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[34]Modeste was not alone with his anti-statism to be sure. The *Dictionnaire de l'Économie Politique* (Guillaumin 1853, p. 324) expressed similar sentiments in Charles Renouard's entry on "Parasites."

[35]Historically there seems to be reason for such skepticism: the inherent insolvency of fractional reserve banking does not necessarily lead to full reserves but rather encourages mutual deals between bankers and politicians. The common privilege of suspending specie payment in times of crisis is only a first step on the way to more systematic inflationary cooperation. On this progression of events, see esp. Hülsmann (1997, pp. 88-90) and Huerta de Soto (1998a, pp. 39-40 and 46).

[36]Huerta de Soto (1998a, p. 42) has argued that this indeed is the historical case: "The legally-invalid (i.e., criminal) historical origin of fractional-reserve banking seems to me to be unquestionable. . . . Once the bankers obtained from the government the privilege of acting on the basis of fractional reserves, their criminal status disappeared." For more documentation on the history of banking from a legal point of view, see esp. Huerta de Soto (1998b, chaps. 1-3).

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fraud against the depositor. Modeste concluded that the proper solution was to deal with it just like with any form of thievery or fraud, and prohibit it under criminal law:

> What I wish is that the law would recognize that not to be able to deliver is equivalent to theft; that to falsify the title, the weight, the value, the time-value . . . is equivalent to theft; that theft in all its forms is theft and everywhere deserves its penalties. . . . [These] are criminal acts and should be relieved under the criminal law. (Modeste 1866b, p. 77)

It is here that Modeste's similarity with Rothbard is difficult to overstate. Writes Rothbard:

> Yet the free market does not mean freedom to commit fraud or any other form of theft. Quite the contrary. The criticism may be obviated by imposing a 100%-reserve requirement, not as an arbitrary administrative fiat of the government, but as part of the general legal defense of property against fraud. (Rothbard 1993, p. 709)[37]

CONCLUSION

The false-money debate of 1866 in the *Journal des Economistes* was the first time that uncompromising laissez-faire advocates clashed on the question of fiduciary media. The defenders of free banking with fractional reserves—Courcelle-Seneuil, du Puynode, and Mannequin—were mainly in line with their present counterparts. They maintained that banks with fractional reserves are relatively stable because they seldom have to redeem all their notes at the same time. They claimed that issues of fiduciary media increase the available credit and benefit the entire economy. The legitimacy of fractional reserves rested—then just as now—on freedom of contract, and the remedy to all banking problems was to abolish all government interventions. Courcelle-Seneuil and du Puynode differed somewhat from their present followers in their argument that fiduciary media, being mere promises to pay in money on demand, are not money at all.

Victor Modeste was with Henri Cernuschi a forerunner of the present-day advocates of free banking with 100 percent reserves. By integrating vital concepts developed by earlier laissez-faire economists in nineteenth century France, Modeste put forth a systematic argument against fiduciary media. He distinguished between money and money representatives, and argued that bank notes are either real money representing the money in reserves, or they are fiduciary media that do not represent anything but thin air. He argued that fiduciary media—whether publicly or privately issued—are a specific type of money: false money. He also defended the theory that business cycles are based on the illusion and error created by fiduciary media.

Modeste was not simply following Cernuschi but was important in his own right. Just as Cernuschi anticipated Mises with his policy conclusions, Modeste was essentially Rothbard's forerunner. To him the key question was about honest business against robbery and fraud. Modeste argued that fractional reserve banking was a form of fraud and theft and that it should be abolished not by central banking but by prohibiting fiduciary media under criminal law.

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[37]This idea is not as radical as it may seem. As Huerta de Soto (1995, p. 29) has informed us: "In the continental juridical tradition, there is a long-established principle that dates back to the old Roman Law according to which custody, in irregular deposits, consists precisely of the obligation to always have an amount equal to that received at the depositor's disposal." For more elaboration on the history and philosophy of law from the viewpoint of banking, see Huerta de Soto (1998b, chap. 1).

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THE CASE AGAINST CURRENCY BOARDS

NIKOLAY GERTCHEV

> The first aim of monetary policy must be to prevent government from embarking upon inflation and from creating conditions which encourage credit expansion on the part of banks.
>
> —Ludwig von Mises, *Human Action*, 1998

Currency boards[1] have enjoyed a resurgence of interest recently. They were first established and adopted in economies in transition: Argentina (1991), Estonia (1992), Lithuania (1994), and Bulgaria (1997). The plethora of practical questions that policy-makers had to face stimulated scientific efforts to give a favorable assessment of this institution.[2] Unfortunately, the accomplishments in this field have not been equal to the endeavors. Currency boards (CB) are still considered and advocated as an appealing alternative to modern central banking. Hanke and Schuler who initiated and have dominated the debate have been proposing the establishment of a CB as a universal panacea virtually wherever a monetary crisis has

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[1]Since our analysis of currency boards deviates substantially from the commonly accepted view, the following passage borrowed from Hanke and Schuler will provide the reader with the necessary background:

> A currency board is an institution that issues notes and coins convertible into a foreign "reserve" currency at a fixed rate and on demand. It does not accept deposits. As reserves, a currency board holds high-quality, interest-bearing securities denominated in the reserve currency. A currency board's reserves are equal to 100 percent or slightly more of its notes and coins in circulation, as set by law. The board generates profits (seigniorage) from the difference between the interest earned on the securities that it holds and the expense of maintaining its note and coin in circulation. It remits to its owner (historically, the government) all profits beyond what it needs to cover its expenses and to maintain its reserves at the level set by law. The currency board has no discretion in monetary policy; market forces alone determine the money supply. (Hanke and Schuler 1991, p. 5)

[2]See Schuler (2002) for an exhaustive currency board bibliography.

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erupted. In addition to their role in implementing the aforementioned CBs, they recommended such a system for Russia in 1993, Jamaica in 1995, and Indonesia in 1998. The objective of their proposal is nicely summarized in the introduction to one of their numerous monographs: "It describes the difference between how money is supplied in a currency board system and in a central bank system. It demonstrates why the currency board system is superior to a central bank system" (Hanke and Schuler 1991, p. 4).[3]

Hanke and Schuler base their demonstration of this unqualified superiority upon four major arguments. First, CBs establish perfect convertibility between domestic money and foreign currencies, a task in which central banks, often forced to devalue, seldom succeed. This foreign convertibility, deemed inherently impossible under a central bank, is viewed as the basis for a stable economic context which is apt to enhance decentralized planning and give access to the international division of labor. In their words: "A currency board system is by nature a fixed exchange rate monetary system, while a central bank is not" (Hanke and Schuler 1991, p. 16).

> The currency board system offers a degree of convertibility and predictability that central banking has difficulty matching. Consequently, the currency board system is more likely than central banking to encourage investment, especially foreign investment, and to result in sustained economic growth. (Hanke and Schuler 1991, p. 36)

Second, the board's rule of holding 100-percent reserves in assets denominated in the foreign currency is tantamount to preventing the monetization of the government deficit and hence precludes any opportunity for active monetary policy. This constraint forces the government to practice financial prudence, eliminating inflation once and for all. As Hanke and Schuler write:

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[3]Other literature does not fundamentally challenge this view. Rather, all authors concentrated their research on the discovery of the precise conditions under which a CB turns out to be preferable to central banking or to dollarization (euroization). Optimal currency area arguments (Zloch-Christy 2000), price flexibility (Williamson 1995), soundness of the banking sector (Santiprabhob 1997), and the ability to prevent currency crisis (Ho 1999) are some recurrent topics in the evaluation of the gains and costs relative to the institution of a CB. The cost-benefit analysis in these studies falls into the trap of holism since costs and benefits for different economic agents are compared and even summed up.

De Haan et al. (2000) even concluded that the policy-maker should choose between a CB and an independent central bank depending on the ability of each institution to reduce inflation in a particular context. This suggests that a CB is worth implementing only during the finite period that its superiority is effective.

CBs rapidly became considered the ultimate irremovable peg contrasting with the other extremity of conceivable monetary regimes, flexible exchange rates (Frankel 1999). They have also been integrated into and modeled in terms of the rules-versus-discretion debate (Irwin 2001).

A recent authoritative and very positive evaluation of this institution has been provided by Dornbusch (2001).

All of these studies differ in regard to the particular CB's characteristic that they intend to examine. They also differ in their results due to methodological divergences and differences in the data sets used for empirical work. From this point of view the comparison between Schuler (1992) and Schwartz (1993) is striking. Nevertheless, they all share a fundamental common point inherited from the influential writings of Hanke and Schuler, that a CB is different from, indeed even opposed to, a central bank. Thus, CBs have been theoretically studied as an alternative to central banking and practically established with this belief.

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> Under the currency board system, East European governments would have to finance themselves exclusively by taxation and borrowing, not by inflation, because a currency board cannot be an agent of government finance. (Schuler and Hanke 1991, p. 3)

Third, a CB works very simply, according to an automatic mechanism equilibrating the balance of payments. It is similar to the price-specie-outflow mechanism first described by David Hume (1987, pp. 308–26). "By design, a currency board has no discretionary powers. Its monetary policy is completely automatic, consisting only in exchanging its notes and coins for the foreign reserve currency at a fixed rate" (p. 6). In the same vein:

> As under a gold standard, or gold exchange standard, in a currency board system the amount of credit that banks can create (and hence the total money supply) is limited by their ability to acquire and keep reserves sufficient to support that amount of credit. (p. 7)

Last, but not least, Hanke and Schuler emphasize the CBs' excellent historical record as final proof of their superiority. In the conclusion to his doctoral dissertation Schuler says, "The currency board system had on the whole an excellent record" (Schuler 1992). The continual reference to successful past results of CBs is best conveyed by Hanke: "In consequence, the burgeoning literature on Currency Board Systems often suffers from a reckless disregard for reality" (Hanke 2000, p. 49).

Besides these four stylized arguments, Hanke and Schuler employ an additional stratagem. They systematically present the CB as the monetary regime most suitable for and compatible with market economies, nascent ones in particular. "The currency board system relies entirely on market forces to determine the amount of notes and coins that the board supplies" (Hanke and Schuler 1991, p. 7). The same message appears on page 21: "In short, then, a currency board is an almost foolproof institution because it cannot act as an independent disturbing element in the economy. Market forces call the currency board's tune."[4] Consequently, under Hanke and Schuler's influence, economists of the last decade supported the view that a CB is a viable alternative to central banking, and expressed the hope that a trend toward free banking would occur.

This scientific position is erroneous and misrepresents what kind of institutions a real market economy, one consistent with individuals' property rights, could bring into existence. The primary goal of the present study is to correct this error, whatever the reasons for its occurrence.[5] The fundamental distinction between money and money substitutes in the tradition founded by Jean-Baptiste Say will be the starting point. After disclosing the true nature of CBs, we will be in a better position to assess each of the four pro-CB arguments.

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[4]Thus, to discourage any probable opposition to CBs, Hanke and Schuler used an rhetorical subterfuge, pretending in fact that a potential opponent to the CB system is indeed opposed to the free market!

[5]Indeed, a decade after their first publication on CBs, Hanke and Schuler have become the leading advocates of dollarization (euroization), claiming that this institutional setting surpasses the CB on the grounds of enhanced credibility, since a corrupted government can still abolish, by political means, the CB. This complete *volte-face* raises the interesting question whether present-day CBs have not been intentionally implemented as an intermediate stage toward full dollarization (euroization). The answer to this question lies outside of the scope of this study.

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MONEY AND MONEY SUBSTITUTES

Money is the general medium of exchange. It is neither a consumers' nor a producers' good, but a commodity which has been selected by market participants for its particular physical characteristics and high degree of marketability (Menger 1892; Mises 1980, pp. 42-46). The marketplace is the origin of money and free-market production is the natural way of increasing its quantity.[6]

The discovery of indirect exchange, and eventually of money, enhances social cooperation since individuals are then enabled to engage in transactions using monetary prices. Economic calculation becomes possible and the decision process is considerably improved. Money allows people to become informed about profitable exchange opportunities and to seize them at the most appropriate moment. Individuals can assess their decisions through calculation in monetary terms, discover errors, and correct them for improved future action.

With the extension of indirect exchange, the costs implied by transportation, loss, wear and tear of money increase, and the circulation of money becomes expensive, so to speak, for its users. A qualitative improvement of the monetary economy then consists in the immobilization of the money and its replacement in daily exchanges by something which is less costly to circulate. That is how logically, from a cost-reduction perspective, the category of money substitutes is brought into existence. The particular form of these money substitutes is merely a practical question. Notes, deposits, and electronic portfolios are different forms which have appeared at different stages of society's technological advancement. The economically relevant issues are to understand whether money substitutes differ from money and whether the category of money substitutes is homogeneous.

J.B. Say clearly answers the first of these questions:

> But a bank-note, payable on demand, is the representative, the sign, of the silver or specie, which may be had whenever it is wanted, on presenting the note. The money or specie, which the bank gives for it is not the representative, but the thing represented. (Say 1971, chap. 21, §6)

A money substitute is then a warehouse receipt, which simply attests to the ownership of a given quantity of money held in the bank vault. The holder of the money substitute, not the bank, is the legitimate owner of the stored money, says Say. Convenience alone prompts people to substitute these receipts, authentic claims on money, for the commodity money, which is now immobilized in a particular warehouse for money called a giro bank.[7] It is important to emphasize that even if the whole stock of money, whatever the reason for this situation, is deposited in the warehouse, so that only the warehouse tickets keep on circulating, in no case do the latter become money. They remain money substitutes which have been brought into being in substitution for money.

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[6]This emphasis is important. Although it is difficult today to find a proponent of Knapp's theory for the creation of money by the state, the prevalent view among economists is to consider money as a kind of social contract, the warranty for which, not surprisingly, is the state (Samuelson 1958; Hicks 1989, p. 45; Tobin 1996, chap. 5). Samuelson's seminal article gave birth to the overlapping-generation models whose paradoxical conclusion is that money is useless!

[7]A giro bank is an association whose members deposit sums on which they draw drafts for their creditors, thus avoiding the cumbersome transport of the money involved. This is also called a deposit bank, and the first one was created in Venice in 1171.

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Within the category of money substitutes, Mises introduces the fundamental subcategories of monetary certificates and fiduciary media. Monetary certificates are issued as substitutes corresponding to the exact amount of money which is withdrawn from circulation. As a result, all banks are 100-percent reserve banks and their activity does not alter the relationship between the supply of and the demand for money.[8] Fiduciary media comprise those money substitutes that have been issued without a prior equivalent deposit of money. They are the product of fractional reserve banks and, being physically indistinguishable from monetary certificates, are accepted by individuals as identical to the latter.[9] Thus, the praxeologically relevant quantity of media of exchange–all money substitutes, which are perceived by individuals to provide the same services as money does, and money outside of the bank vaults–becomes a multiple of the money stored in banks. Mises (1980, p. 155) describes this quantity as "money in the broader sense."

The impact of money substitute production on the organization of the banking sector is of particular interest. As far as the production of monetary certificates is concerned, banks have an incentive to organize a clearinghouse, since mutual compensation between the certificates they issue will result in smaller genuine money transportation costs. Similarly, the bankers may also decide to put together, in one or more institutions, the deposits they hold in order to reduce protection costs. The bankers' ingenuity may give birth to various institutional settings, but under 100-percent reserve banking, none of them can influence the total stock of money in the economy and thus modify the price relations.

The outcome is utterly different when banks are involved in the production of fiduciary media. To be sure, they are still prompted to organize a common clearinghouse, but an additional element, relative to the limitations on the issuance of fiduciary media, tends to result in new functions of this clearinghouse. Although these limitations do exist and have been largely documented in the literature (Mises 1998, pp. 431-45; Rothbard 1983, pp. 111-24), the fundamental condition for the perpetuation of the fractional reserve system is individuals' abstention from redeeming more money substitutes than the amount of the commodity money available in the banks. To the extent that individuals do not intend to redeem a substantial part of their claims on money in money, bankers can go on increasing the supply of fiduciary media by the profitable operation of providing circulation credit.

The ultimate limit on the production of fiduciary media is provided through recurrent bank runs, which are nothing else but the correction of error in the perception of reality; the bank's clients realize that, contrary to their expectations, the whole stock of money substitutes cannot be redeemed, and that some claims will not be honored. In their attempt to be among the first who require the redemption of their claims, the clients create a contagion effect which surprises the bank with a demand for money it cannot satisfy. Therefore, it has no other alternative than to declare its bankruptcy. In short, fractional reserve banks are menaced by the very essence of their nature and this creates a natural tendency toward self-insurance

[8]We think that the term "100-percent reserve banking" was particularly badly chosen. One is under the impression that these reserves are held by the bank just to back the money and guarantee its soundness. In fact, the reserves are the money.

[9]We will not deal here with the difficult question of why and how fractional reserve banking became possible. Mises states that it appeared on the free market as a solution to the alleged impossibility of profitably issuing money certificates: "Issuing money-substitutes is a ruinous business if not connected with issuing fiduciary media" (Mises 1998, p. 432). Rothbard gives another explanation, pointing out the merely criminal yet lucrative character of fractional reserve banking: "It should also be clear that 'fractional-reserve warehousing' is only an euphemism for fraud and embezzlement" (Rothbard 1984, p. 37).

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against failure. Thus, commercial banks engage in a process of complete homogenization of the money substitutes they issue. They also pool the money remaining in their vaults[10] within a central bank, vesting it with the function of lender of last resort. Consequently, the clearinghouse becomes the bankers' bank and the monetary system acquires its two-tier shape that we see today. Salerno (1991, p. 371) calls this evolutionist explanation the "progression theorem," which is further elaborated in the works of Huerta de Soto (1995) and Hülsmann (1997), and is incontestably recognized by the free banking school (White 1999, pp. 70–77).

The logical repercussions of the fractional reserve banking system are the appearance of this one-reserve system and the possibility for massive bail-outs of imprudent bankers.[11] The central bank is merely the depository of bank reserves, the remaining commodity money. The protection that banks obtain is however rather imperfect, since a generalized bank run cannot be prevented by the bankers' bank whose reserves are also only a fraction of its total liabilities. Historically, the remaining risk was eliminated by the transformation of the bankers' bank into a money producer. The latter denied note bearers the redeemability of their claim in commodity money, thereby encroaching on individuals' property. This transformation implied an economy-wide abrogation of monetary contracts, which required banks to redeem fiduciary media on demand. Such infringement of property rights was possible only because of the state's local monopoly of coercion. Trying to render fractional reserve banking a lasting institution, the state seized the commodity money and replaced it by a fiat money, coersively imposed upon the economy.[12]

Therefore, modern central banks play a twofold role, serving as a banker for banks as well as producing the money to bail them out.[13] Modern centralized banking systems are characterized by an implicit agreement between a central money producer and subordinate, yet private, commercial banks which open accounts and grant circulation credit.[14] The former obtains a new income source—the inflation tax—and engages in the protection of the latter which are grateful for the privilege of creating loanable funds out of thin air and collecting interest payments (Hoppe 1990).

However, this implicit agreement is a rather defective solution to the inherently bankrupt fractional-reserve banking system. Ultimately bank runs are not eliminated,

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[10]As mentioned in the previous paragraph, it is not excluded that 100-percent reserve banks decide to pool the money they hold in an institution which economists would call also the "bankers' bank." However, in this case the sole function of this "bankers' bank" would be to better secure the safekeeping of the money, not to finance a banker in difficulty.

[11]Bagehot ascribes the origin of the one-reserve system in England to the legal privileges enjoyed by the Bank of England: "Thus our one-reserve system of banking was not deliberately founded upon definite reasons, it was the gradual consequence of many singular events, and of an accumulation of legal privileges on a single bank" (Bagehot 1931, p. 97). This point of view is equally endorsed by Smith (1990, pp. 4–5). Let us simply point out that the original, most important, legal privilege is that of the production of fiduciary media granted to the whole banking system.

[12]On the impossibility of coexistence between a commodity money and a fiat money without compulsion, see Hoppe (1994) and Hülsmann (1996).

[13]Unfortunately, neither Smith's *magnum opus* (1935) nor Goodhart's (1988) famous monograph make the distinction between those two logically separate functions of modern central banks. This omission is all the more unsatisfactory, since Peel's Act, which has a great place in those studies, split the Bank of England into a banking department (bankers' bank) and an issue department (central fiduciary media producer destined to become a fiat money producer).

[14]Nothing limits the extension of the central bank's monopoly to the dimension of the state. This is shown in Hülsmann (1997).

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but they become rare. The existence of a discretionary central money producer prompts the banks to adopt less prudent behavior, thereby creating the need for bailing them out. This moral hazard problem, already anticipated by Bagehot,[15] is the major reason for the occurrence of financial crises.[16] The latter are the outcome of a loss of confidence in the national money[17] and inevitably result in a decrease in its purchasing power. The continuous rise in money prices is a great concern for the whole banking system, since the eventual rejection of the money by market participants seriously cuts the expected revenues for both the central money producer and the commercial banks. Independent from the measures undertaken by the private banking sector to discourage deposit withdrawals, the central money producer seeks a means to regain its position on the top of the credit pyramid, moved by the goal of restoring its ability to collect the inflation tax.

We will now show that the so-called currency board provides the state with such a tool. CBs are deliberately devised by a failed central money producer who intends to restart its tax collection activity at a later time.

The Nature of a Currency Board

The production of fiat money, i.e., inflation, results in a continuously diminishing purchasing power of money. If individuals believe that this process will not come to a halt soon, they will select another asset that is more suitable in which to store wealth, and will thereby trigger a hyperinflationary spiral (Mises 1980, pp. 256-61; 1978, pp. 10-12). Under present conditions, we observe that the dollar or German mark (now euro) bank notes usually replace the useless national paper money in every country experiencing hyperinflation.

The kind of money is altered, but its nature remains the same as the new money is also a paper currency. Typically, the country becomes dollarized or euroized spontaneously, that is, without any political or collective agreement between the residents of the hyperinflationary territory and the foreign fiat money producer. Such a collective agreement is not necessary, since each individual draws an obvious benefit; the foreign money producer enlarges the territory upon which he levies his inflation tax; the participants of the economy in hyperinflation are more than happy to pay this new lower tax. This is a concise and adequate explanation of how good money drives out bad money if individuals are left free to choose between them. However, this outcome seriously decreases the revenue of the previous money producer who is ousted from business as a punishment for hyperinflation. What he can do in response is to interpose himself between the foreign money producer and the inhabitants of the country where he is located by virtue of a CB, claiming that he is still in the money production business. Let us first state some economically important aspects of the CB.

A CB is an institution which issues domestic bank notes in exchange for a specific foreign currency (in almost all cases this is the foreign currency people have

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[15]Cf. Bagehot (1931, p. 108): "but indisputably one of their effects [the suspensions of Peel's Act] is to make people think that Government will always help the Bank if the Bank is in extremity. And this is the sort of anticipation which tends to justify itself, and to cause what it expects."

[16]On how the moral hazard problem eventually leads to the breakdown of the fiat money system, cf. Hülsmann (1998).

[17]We prefer to reserve the term "national money" for the case where a national, in fact state-owned, money producer is present. The term "domestic money" signifies the money used *in* the country, but *not necessarily produced* by the local state.

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freely chosen by rejecting the national inflationary money), and promises to continually maintain this conversion at a constant rate. The CB merely reacts to the individuals' desire to surrender the foreign currency units they possess or to take them back; the CB cannot purposefully influence the quantity of bank notes issued, neither can it increase the stock of cash within its territory, for such an increase can only happen when goods and services are exchanged against foreign currency units. The new money can only be purchased from abroad.[18]

The crucial point is that a CB is not a money producer; it is not even a money changer. It is a mere warehouse which issues receipts for the deposit of a specified foreign fiat paper money, which is the genuine money in the CB country. Now we can logically distinguish between a CB that keeps the total sum of the deposited foreign currency units in its vaults, and a CB that invests *even* one part of the deposits in foreign assets. We may call the former a "100-percent reserve currency board" and the latter a "fractional-reserve currency board." As a matter of historical fact, only fractional-reserve CBs have existed and the term "currency board" has always meant, and will designate in this article, "fractional-reserve CB." The receipts issued by a "100-percent reserve CB" are monetary certificates, which represent a genuine claim on a specific amount of money in which they can always be redeemed. A "fractional-reserve CB" is also deprived of the right to issue receipts without the previous deposit of foreign currency units, but since it keeps only a portion of the deposit in its vault, the receipts are fiduciary media. Thus, a CB obtains a substantial revenue, called seigniorage, from its investments in assets denominated in the foreign currency, at the expense of the obvious impossibility of instantaneously redeeming the whole stock of receipts issued. Thus, a CB acts like a fractional reserve bank receiving deposits of money and issuing money substitutes.[19] The fractional-reserve aspect implies that all property titles cannot be redeemed at the same time. One of the goals here is to examine whether this is the *only* violation of property rights that goes hand in hand with the establishment of a CB.

It is also important to identify the two different ways of introducing a CB. A CB can start by issuing new bank notes, completely distinct from those issued by the failed money producer. Even though a market exchange rate between the two may emerge, the latter, which have already been rejected, will surely be driven out so that at some point the currency-board bank notes will be the only ones circulating. The second alternative is to transform the old fiat money back into money substitutes, continuing their issuance only when foreign currency units are deposited with the CB. Before it starts operating, the CB must, in this case, be in possession of foreign currency equal in value to the already existing stock of bank notes at the prevailing rate of exchange. It can receive these foreign currency units, which it does not initially

[18]These fundamental and invariable features are accompanied by other characteristics according to which Schuler (1992) distinguishes between an orthodox (first-generation prior to 1913) and an unorthodox (second-generation) CB. A first-generation CB precludes all lender-of-last-resort functions as well as the requirement for commercial banks to hold reserves with the CB. A second-generation (present-day) CB does not completely remove these features inherited from the previous money production monopoly enjoyed by the dismissed central bank. Other alterations to this generally simple structure of a CB have also been proposed, but we will not address them here, since they do not substantially change its nature. For further details, cf. Le Maux (1999) and Oppers (2000).

[19]As a portion of the deposited foreign units serves to purchase foreign assets, the drain of dollars or euros out of their producer's country is limited while an additional market for debt instruments issued there is created. There are no other differences between a CB system and a dollarization (euroization).

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possess, only through transfers or loans, in which local private individuals and institutions may have little interest, since they need the foreign currency for their monetary transactions. Even though the second method of introduction, preferred in all recent CB implementations, actually reveals a connection between the CB and the failed money producer, as well as foreign institutions that are needed to finance the CBs start-up, the more general question whether a CB can be privately managed or not still remains.

Can A Currency Board Emerge On An Unhampered Market?

A CB, as it is theoretically conceived, can be a profit-earning warehouse. This would suggest that the economic conditions for the emergence on the private market of a free supply of the services a CB offers are fulfilled. However, is the profit from CB operations a sufficient condition for its private occurrence and, if so, can we expect this profit to vanish through competition as suggested by Hanke and Schuler (1998, pp. 418-19)?

A CB is a warehouse for money. For such a warehouse to be privately organized, individuals must value positively its services and express a lasting demand for them through their readiness to pay a positive price. When analyzing this issue, one cannot help thinking of the giro banks, the historical example of warehouses for money. They appeared because offering a safe-keeping service for a commodity money liable to theft, transportation costs, insurance costs, and wear and tear was profitable. In the case of a commodity money, money substitutes were sometimes deemed superior in respect to their physical qualities. For example, a paper ticket is much more transportable, particularly in the case of large amounts of money. In addition, depositors benefit from the accounting service. Their superior convenience for money users is the sole reason justifying the existence of a free-market demand for money substitutes.

This rationale cannot be applied to the case of CBs. Although a CB is a warehouse, the physical qualities of the good stored–paper currency–do not differ from those of the receipt certifying the safe-keeping contract. For individuals to demand the production of domestic paper money substitutes as a replacement for the foreign paper money they have been holding since their loss of confidence in the national money, the obvious transformation cost must be offset by important benefits. Such possible gains can be the printing of bank notes in the domestic language and their production in denominations better suited for domestic preferences. Even if these benefits cannot be denied, nothing guarantees that they will compensate for the transformation cost to such an extent that individuals will willingly surrender their foreign exchange units to a CB, privately instituted for this particular purpose and devoid of a reputation record. After all, the largest part of the U.S. Federal Reserve dollars are used outside of the U.S., without their transformation by a CB into domestic money substitutes. And why should they be if their direct use in exchanges is in no way riskier or more costly than the use of some other paper bank notes which represent them?

To summarize, the nature of the good stored, namely paper fiat money, renders the emergence of a CB as a market phenomenon highly improbable.[20] Although

[20]We agree that fiat money itself is not a market phenomenon. However, this fiat element is absent in the CB country whose inhabitants select a foreign fiat money for domestic currency, as they select other goods on the free market. Thus the question whether a CB is a free-market institution or not is still relevant.

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technically a CB yields revenues for its owner,[21] the services of a private CB are unlikely to be demanded. *A fortiori*, the competition between currency boards Hanke and Schuler imagine is impossible. If a CB cannot be privately managed but we nevertheless observe its existence, the *only* explanation is that a CB is a creation of the state. The government simply implements it and declares the money substitutes it issues as legal tender.[22]

An apparent alternative to the establishment of a CB for a state whose national money is rejected would be to start issuing a new money.[23] Establishing a CB is the predominant choice, for the use of a foreign currency enables the state to borrow on foreign financial markets (Dornbusch 2001). This would be impossible with a new national money.

Moreover, recent introductions of CBs have been financially aided by the International Monetary Fund (IMF). The so-called "currency-board arrangements" turned out to benefit the IMF's own institutional interests. At a time of severe criticism regarding its continued usefulness, the IMF found in the implementation of CBs a wonderful tool ensuring its survival. By discussing the applicability of a CB in several countries it recovered some of its prestige and power.[24] Some authors recently have even claimed that the Bulgarian CB was deliberately introduced by the IMF to serve its own interests (Nenovsky and Rizopoulos 2002). At any rate, whomever initiates the introduction of a CB, it cannot emerge on the unhampered market and it serves the interests of both the failed money producer and the IMF.

It seems that we need to refine our definition of a CB: a CB is necessarily a state-owned fractional reserve bank for foreign fiat paper currency, imposing the usage of its receipts as domestic currency through legal-tender laws. We are now better prepared to grasp the misconceptions involved in the debate about CBs.

Some Fallacies Unveiled

Assume that the country where you live experiences hyperinflation and your fellows, like you, turn toward the use of euros. The state decides to introduce a CB in the second way presented above, by transforming the inflationary bank notes it has been issuing back into money substitutes. The legal-tender privilege conferred upon the bank notes is essentially intended to prevent individuals from understanding the transformation in the nature of the bank notes. People do not perceive the new essence of the bank notes, which merely represents a claim on a foreign currency;

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[21] On the nature of this revenue, see footnote 26.

[22] Let us emphasize that the legal-tender privilege in no way transforms the CB notes into money, provided that the former remain simple claims redeemable in the foreign currency. Furthermore, even though these money substitutes may be quoted on some foreign exchange markets, it is extremely doubtful that investors and speculators will include them in their portfolios. First, for the same rate of return, the foreign currency surpasses the money substitutes because of its higher liquidity outside of the CB country. Second, it is impossible to calculate investment strategies including both the foreign currency and the money substitutes because of the necessary singularity of the variance-covariance matrix of returns. In conclusion, only individuals willing to buy and sell goods and services in the CB country express a demand for the money substitutes, and this solely by virtue of the legal-tender privilege.

[23] This kind of monetary reform was applied twice in Germany: in 1923, when the Rentenbank started issuing the new Rentenmark, and in 1948 when the latter was replaced by the Deutsche Mark. For a comprehensive overview of these two monetary reforms, cf. Sennholz (1979, pp. 79-108).

[24] Consequently, a considerable part of the research on CBs was undertaken by the IMF, as evidenced by our bibliography.

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they are misled into the false belief that the once nationally produced money continues to exist.

Once people regain their confidence in what they are led to consider as national money, the CB's owner (the state) is now able to transform itself into a genuine national money producer. It can recover the money production function by simply starting to issue notes without first receiving foreign currency units. This would lead to the abandonment of the "100-percent rule." It would not be difficult for the state to convince people that this "rigid rule" is no longer necessary, since the people have always believed that the domestic money was actually produced by the CB.

This scheme can technically succeed because the CB's receipts are embodied in the same bank notes once produced by the former central bank. The confusion originates from the total absence of product differentiation, although denominations may change because hyperinflation made them cumbersome, like in Bulgaria. The CB's money substitutes even bear the same name as the national money once did. Thus, the labels "lev" and "kroon" are still printed on the bank notes in circulation in Bulgaria and Estonia, preventing users, and even some economists, from understanding that they are plain definitions of a particular *quantity* of euros, not the name of a specific money.

Ideologically, the misconception is maintained by several theoretical fallacies. First, the domestic currency is said to be backed by foreign reserves,[25] an assertion which prompts one to think that the domestic money exists *per se* and the reserves are there solely to inspire confidence by its users. The causal relation is exactly the opposite. What is meant by "backing reserves" is in fact the money and it is the property of individuals, not of the board, despite the fact that the latter enjoys the usufruct of the deposited foreign currency units (seigniorage).[26] What is falsely considered as domestic currency is in reality a bank receipt, a title representative of a certain quantity of money deposited with the board.

Second, the attention paid to the fixed exchange rate problem has been completely misguided. By definition, the "rate of exchange" between money and money substitutes is fixed at par and is nothing but a rate of conversion. The idea of a price between one entity and its representative sign makes no sense (Rothbard 1997, p. 353). The rate of exchange between two monies is the price at which market participants can exchange the quantities of monies they wish. There cannot be a rate of exchange between the CB's bank notes and the foreign money since the bank notes in question are not money. Moreover, there cannot be any possibility for devaluation unless the bank's owner, the state in the case of a CB, seeks means for the expropriation of the

[25]We can read:

> For example, an Independent currency authority might issue domestic currency that is convertible into a specified foreign currency at a fixed exchange rate and back up this commitment by holding a foreign reserve cover equal to 100 percent of the currency issue. (Osband and Villanueva 1993)
>
> A currency board is credible only if a country's central bank holds sufficient official foreign exchange reserves to cover at least its entire monetary liabilities, thereby assuring financial markets and the public at large that every domestic-currency bill is backed by an equivalent amount of foreign currency in the official coffers. (Gulde 1999)

[26]In fact, since the CB's services are not freely demanded and the genuine money is the individuals' property, this usufruct is pure theft! It belongs to the holders of bank notes, not to the state. One possible means for its legitimate restitution could be to deduct it from the payment of annual taxes, despite the difficulties for the evaluation of every individual's bank note holdings.

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depositors by giving them back less than the amount they deposited. The real issue is not finding the competitive exchange rate,[27] but whether individual property rights are protected or not. How was it possible at all to introduce such a misplaced debate about the "exchange rate"? This confusion arose because the essential difference between the old national money and the new CB's money substitutes had been overlooked. If there is an exchange rate to be determined, it is between these two entities, and only in the case where the two are physically distinguishable, in short when the first way of introducing a CB is chosen.

An additional technical element helps the state to prevent individuals from seeing reality in general and the rate of conversion, in particular. All modern CBs collect a small fee (up to 0.5 percent in Bulgaria, for instance) when "exchanging" the "reserve currency" for the "domestic currency." This token fee is integrated directly into the "exchange rate" so the conversion is never exactly equal to the declared parity. The illusion of a slightly moving "exchange rate," within limited bounds, determined by arbitrage, economists say, is then created. Arbitrage between what entities, money and money substitutes? It is evident that this fee is the remuneration for the conversion service of money into money substitutes, and it should be the CB's only revenue.

Let us emphasize that although the old bank notes keep on circulating, under a CB their nature has been fundamentally changed; they are no longer paper money but paper money substitutes. Under a CB system the money is the foreign exchange currency deposited with the board and owned by the individuals. For instance, the real money in Bulgaria, Estonia, and Lithuania is the euro, and the Singaporean dollar plays the same role in Brunei. Thus, one is inclined to think that the property of money is incontestably restored to its ultimate users—the market participants—but a deeper analysis of the monetary policy channels under CB will reveal this viewpoint as incorrect.

Is Monetary Policy Impossible under a Currency Board?

It is also traditionally accepted that active monetary policy is impossible in the presence of a CB. This claim rests on the ground that the quantity of money is freed from political interference. But one should recognize that only local political discretion is precluded by the CB. The money used is not a commodity money whose production is entirely governed by market incentives; it is the fiduciary product of a foreign central bank. Therefore, the stock of money in a CB country is necessarily influenced by the policy followed by the foreign money producer. This fact has two main implications.

First, channels through which the new CB monetary units are diffused differ from those one could observe under an independent money producer. The newly created units of money are first received, normally but not necessarily, by the foreigners who inhabit the country of the foreign money producer. They start spending this money according to their preferences, and hence bid up the prices of all the commodities they purchase. The moment arrives when a part of the new money is spent on goods produced by the country that has adopted a CB. Here exporters are the first to receive all new monetary units and their preferences determine the domestic price changes, inevitably triggered by an increase in the stock of money.[28] Therefore, an inflationary

[27]This supposedly important question was addressed during the last five years of the Argentina's CB. It shows the great difficulties the IMF officials experience in understanding what a CB is, despite their significant production of theoretical and empirical research in this field.

[28]This concerns exporters of goods or securities, since a portion of the new money can be received in the CB country in the form of additional loans.

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monetary policy pursued by the foreign money producer is tantamount to an expansionary monetary policy that a domestic money producer would have followed by first buying goods from the export sectors of the economy. It means that all export sectors are particularly privileged by a CB and we should expect them to lobby in favor of its introduction.

Consequently, the failure of a domestic money producer is not the sole condition for a CB implementation. The latter can also result from a mere political decision, its goal being to favor one or several foreign-markets-oriented sectors of the economy at the expense of all other individuals who, being employed by the domestic-oriented sectors, are affected by a negative transfer of wealth. This explains why sometimes a government selects as genuine money a foreign currency different from the one individuals had selected on a free-choice basis, or why it establishes a CB without the previous money producer ever being discredited.[29] The government merely imposes that money which satisfies best the lobby's preferences. A case in point seems to be the shift from the dollar to the euro implemented by the Lithuanian CB in February of 2002. It is a victory for the Lithuanian exporters in the European market over other local special interest groups.[30]

In respect to the above-mentioned transfer of wealth, it necessarily occurs even if foreign prices have not already risen before the CB country's inhabitants touch the new money. Since exporters are those who first receive the new money, all other citizens will see domestic prices rise before they would be able to spend the new money. Thus, their real wealth and income is negatively affected in the case of an inflationist policy introduced by the foreign money producer. The awareness of these wealth transfers, once a CB is instituted, makes the export sectors most attractive because of their newly privileged position. A reallocation of productive resources ensues, which prompts local producers to satisfy the preferences of foreign buyers rather than those of the domestic consumers. The CB develops a kind of Dutch disease.

Eventually, the CB transforms the country where it operates into a subordinate part of a bigger credit pyramid controlled by a central money producer located abroad. This is also a result of the CB's impact on another social group. An independent national money producer would have supported all industries which would have developed under the patronage of the state. One could be tempted to say that the CB eliminates the local state-dependent industries and thus helps improve the allocation of resources in accordance with individuals' preferences. This is, however, not true, since only local-state dependency is eliminated to the great benefit of the state sponsoring the money producer abroad.

Second, the resulting increase in foreign-state dependency clearly contradicts another allegedly positive feature of a CB. By removing or strictly limiting the lender-of-last-resort function, a CB is presumed to substantially reduce the moral hazard problem and to prevent the bailing-out of shaky commercial banks (Fischer in Perry 1997, p. 20). This is true unless the banking sector has or gradually obtains easy access to the foreign money market. It does not preclude that the reallocation of

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[29]Prices of durable goods in Bulgaria continue to be quoted in dollars, five years after the establishment of a CB receiving deposits now in euros. It is obvious that individuals' preferences tended toward the dollarization rather than euroization of the economy. As far as Lithuania is concerned, where the growth rate of the money supply was already sharply reduced in the second half of 1993, the traditional hyperinflationist explanation for the introduction of a CB is highly contestable.

[30]Elena Leontjeva, Founder of the Lithuanian Free Market Institute, expressed this lobby's will quite well in an article entitled "Farewell to the Currency Board" which appeared in the October 1998 issue of *Baltic Times*: "The selected anchor currency, the U.S. dollar, may be a nuisance and is already viewed as such by some business people active in the European market."

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resources in response to foreign consumers' preferences enhances the link with the foreign financial market, especially if foreign banks operate domestically either directly or indirectly (Schwartz 1993). Furthermore, the foreign money producer will not refrain from bailing-out the CB country's banks because this will simply increase the sphere of its influence and the extent of its inflation tax (Hülsmann 1997). As a result, there is no reason that we should expect banks to eventually adopt, for prudent purposes, reserve ratios higher than those observed in the foreign country.

In addition to the above described channels, a more thorough investigation shows that even without producing money, the CB is enabled to influence the stock of media of exchange. The collection of seigniorage regularly increases the assets of the CB, thereby allowing it to issue a supplementary quantity of money substitutes corresponding to this increase in assets, without breaking the "100-percent rule." The state can transform the collected seigniorage into CB bank notes and therefore implement a "money substitutes policy." The possibility for putting the "k percent" Friedmanian rule into practice becomes evident,[31] since the CB is entitled to adjust its investment strategy until it has obtained the desired quantity of seigniorage, and consequently of new money substitutes. This opportunity springs directly from the fractional-reserve aspect of the CB and the illegitimate appropriation of the subsequent revenues by the state. How then is a CB any different from a modern central bank? If Hanke and Schuler really wanted to prevent the CB from influencing the quantity of media of exchange, why then did they not propose the establishment of "100-percent reserve" CBs?

In short, a CB does not remove the possibility for monetary policy, it simply alters its traditional impact, remodeling the industrial orientation of the country. This makes the CB vulnerable to internal political conflicts which stem primarily from its nature. Let us now examine its repercussions, if any, on the banking industry.

The Banking Sector

Are commercial banks, under a CB, limited to the production of monetary certificates only, or instead can they also produce fiduciary media of exchange? Obviously, a CB cannot, and is not designed to, prevent banks from granting circulation credit, thus increasing the false claims on real resources deposited with them. Fractional reserve banking is perfectly compatible with a CB's functioning. Therefore, banking crises and business cycles generated by additional quantities of circulation credit are not removed by a CB. The banks keep their fraudulent power to increase money substitutes "out of thin air" (Rothbard 1983, p. 98). The institution of a CB does not eliminate the credit pyramid; it merely makes it dependent on the foreign money producer.[32] In the case of a loose monetary policy, the exporters receive a part of the additional money and if they do not alter their preferences to hold cash balances, the increment is eventually deposited in the banks, either directly or after transformation of the money into money substitutes issued by the CB. Since the banks hold their reserves either in money or in money substitutes, if they do not increase their prevailing fractional-reserve ratio it necessarily implies that the supply of media of exchange will increase by a multiple of the augmented banks' reserves. A CB does not prevent inflation, because the fractional reserve banking system is inherently inflationary, contrary to the opinion traditionally advanced, which is also professed by Hanke and Schuler (1991, 1998).[33] No

[31]For a brilliant comparative analysis of Keynesian, Monetarist, and Austrian monetary theories, cf. Sennholz (1979, pp. 28-54).

[32]From this point of view, the CB is another example of what government intervention is capable of doing; it does not cure the problem, but only changes the nature of it.

[33]A CB by conception does remove hyperinflation, but there is no theoretical reason for the disappearance of the steady inflation typical of fractional reserve banking.

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empirical studies take account of this evidence, partly because inflation is generally improperly defined as an increase in prices.[34]

The corollary of fractional reserve banking is the distribution of false property titles. Besides the fact that this process results in endemic crises revealing the misallocation of capital, it also means that a CB does not protect individual rights better than a central bank.[35] In this respect, economies in transition, which definitely need an enhanced protection of property rights, can hardly draw a sustainable real advantage from a CB. Increasing formation of capital is what helps individuals to increase their revenues. This is stimulated by generally accepted rules, unbiased enforcement of impartial laws, low taxation (if any), and some other factors, none of which is better provided in the context of a CB.

It must now be emphasized, however, that a national money producer no longer exists. This new situation brings about a twofold consequence. First, the CB evolves into a banker's bank. Since we showed that banks naturally tend to pool their reserves together within the framework of fractional reserve banking, it is not surprising if in this context the CB also becomes the central depository, possibly acting as a lender of last resort. Once the theory of fractional reserve banking is integrated into the analysis, there is no reason to distinguish between an orthodox and an unorthodox CB as Schuler (1992) suggests. The particular features of the bankers' bank are a matter of historical accident; the essential point is that a CB is nothing more than a bank for paper money which can, and does, play the role of a bankers' bank.[36]

Second, being deprived of a money production function, the CB is unable to engage in unlimited operations of lender of last resort. The ultimate protection of the domestic banks can then be provided only by the foreign money producer. Aware of this reality, the domestic banks will search for means to get closer to the foreign money producer with a view to more easily obtaining its aid in a time of crisis. One option for them is to enhance their links with foreign correspondents and to permit their capital assets to be purchased by foreign investors who are more likely to be favored by the money producer.[37] Banks can also attempt tightening the links with the ultimate lender of liquidities through joining their efforts and acting together. The concentration of the banking sector then rises considerably, thereby triggering an increased concentration in all industries which depend on banks for their financing.[38] The industrial consolidation facilitates the connections with the politicians, thereby leading to rent seeking and distribution of privileges. All these elements exacerbate the moral hazard problem, which is definitely not removed by the introduction of a CB.

To sum up, under a CB, individuals do enjoy the advantages associated with the utilization of a money of better quality, which however embodies all of the drawbacks inherent in modern fiat monies. Moreover, these advantages are not the merit of the

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[34]Among the influential empirical studies are Ghosh et al. (1998) and Nenovsky et al. (2001).

[35]The contrary opinion can be found in Hetzel (1993), undoubtedly because the effects of the fractional reserve banking are not considered there.

[36]This explains why in the economies of Eastern Europe, CBs physically operate as a new department within the former central bank which is no longer a money producer, but still a bankers' bank.

[37]The empirical evidence on this point is highly illustrative. The share of foreign investors in the capital of commercial banks in Estonia, Lithuania, and Bulgaria has been constantly rising after the introduction of the CBs, soaring to 83.6 percent in Estonia in 2000; 81.1 percent in Lithuania in 2001; and 74 percent in Bulgaria in 2000. Cf. Eesti Pank (2001), Bank of Lithuania (2002), and Yonkonva (2000).

[38]The studies quoted in the previous note show a doubtlessly enhanced concentration in the banking sectors, in Estonia particularly.

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CB; the latter is an artificial screen between the foreign money producer and the local users of its money. In addition, no real incentives for the emergence of free banking are present, contrary to the hope expressed by Hanke and Schuler (1998, p. 419). On these grounds, we should finally assert that a CB is not a genuine alternative to modern central banking.

CB Superiority Reconsidered

In light of our analysis of CBs, we now reexamine the four traditional arguments first mentioned in the introduction to see if there is anything valid at all.

1. A CB cannot establish the convertibility of the domestic money, because the domestic money is the foreign money. If the foreign money is convertible, then so is the money used by the CB country's inhabitants. But it is erroneous to claim that the introduction of a CB makes a money convertible. This statement results from a confusion, deliberately introduced and maintained by the state, between the previous domestic money and the new money substitutes issued by the board.

2. A CB does not preclude active monetary policy, even though the local state is deprived (or deprives itself) of its command. Given the existence of the inflation tax transfer from the CB country to the foreign money producer, financial transfers in return are not excluded. Their size depends on the ability of the state in the CB country to negotiate its share of the seigniorage revenue. Thus, government profligacy is not necessarily eliminated, especially if we consider the open access to foreign financial markets allowing for large indebtedness.

3. Although a CB system does have some similarity to the gold exchange standard, the analogy of an automatic balance of payments mechanism is irrelevant. The gold exchange standard is anchored in a commodity money; in the case of a CB the money is a fiat paper currency. The latter's extremely low cost of production enables the foreign money producer to supply the CB with purposefully printed foreign currency units, thus increasing the stock of money in the CB country. Such political interferences, underestimated,[39] thwart the operation of the aforementioned automatic mechanism. We can go even further with criticism of this third argument. Stated as it is, it gives the impression that the CB country is completely independent of the foreign country, with its own money and balance of payments. But what is the rationale for considering its balance of payments independently from that of the foreign country, provided that the same money is used in the two territories? The mistake has been to consider two geographically distinct territories as two economically different areas. Our analysis insisted on the tight links between the two countries, prompting us to say that the CB country is literally annexed to the foreign country. This monetary annexation represses the development of local capitalist institutions, financial markets in particular, because it allows the CB country's inhabitants to benefit from the already existing institutions in the country of the foreign money producer The identification between capitalism and a CB introduction is then completely fallacious.

4. As far as the historical evidence is concerned, the fact that all past CBs have been owned by governments validates our conclusion that the identification between the CB system and the free market is flawed. Hanke and Schuler fail to integrate this datum into their empirical work. We can therefore reject the latter on account of its biased incompleteness.

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[39]These are not the only manipulations a CB can realize. It can apply a different rate of conversion for foreign currency units deposited by the government, which received the latter as a credit from the IMF or from a foreign government. This creation of indistinguishable false money substitutes may of course be carried out at the advantage of another special interest group.

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Conclusion

We have argued that a CB is a creation of the state, aiming at granting particular political favors, and purposefully designed to secure the reappearance of an independent domestic money producer.[40] A CB establishes a foreign fiat money standard enforced by legal tender laws for its bank notes, which are mere money substitutes in the context of fractional-reserve commercial banking. This insight helps us to understand why CBs have always degenerated into national central banks of the modern type: they were intentionally created to do so. This surely will also be the fate of present-day CBs. Although technically the transition from a CB to a commodity money (gold or other commodity standard) is facilitated by the warehouse aspect of the currency board, this institution does not present any incentive for the policy-makers to subject the production of money to the regulation of the free market.

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[40]It means the traditional claim "A currency board depoliticizes money" is another myth.

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A Theory of Interest

Jörg Guido Hülsmann

In a recent survey on interest theory, Professor Sennholz (1996, p. 127) reminded his readers that, as "was the case a century ago, the phenomenon of interest income continues to be enmeshed in much controversy, which makes it one of the most open and demanding subjects of economic inquiry."

What is this controversial phenomenon of interest income? In the most general way, it can be described as follows: Successful business is characterized by a positive spread between the sum total of prices paid for its factors of production and the sum total of prices received as proceeds for its products. The entrepreneur earns more money by selling his products than he spends on the factors of production that bring these products into being. The customers pay more money for his products than he pays for the factors of production of these products.

This phenomenon raises the fundamental question whether the entire spread between selling proceeds and cost expenditure can be "arbitraged away" through entrepreneurial competition, or whether at least a part of this spread cannot be so arbitraged away (see Kirzner 1993, p. 167f.). In other words, does the entire spread consist of entrepreneurial profit, which can be eliminated as a consequence of the competition of other entrepreneurs, or does it contain a component that cannot be so eliminated–does it also contain an interest component? And if it does contain an interest component, what is its cause?

All theories of interest seek to answer these questions. In the present article, we will criticize the established time preference theory. and then give the outlines of a realist explanation of interest.

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A Critique of the Time Preference Theory of Interest [1]

Austrian Definitions of Time Preference

Eugen von Böhm-Bawerk's great achievement was to formulate the problem of interest theory as a value problem. He sought to explain interest as resulting from human choice and exchange, rather than as being caused by some factor outside of human action. The crucial point was that, if interest sprang from some feature of human choice, then it sprang from a fundamental value *inequality*, because choice involved the preference in action of a more valuable alternative over a less valuable one. Accordingly, observable interest rates manifested an inequality between the value of products and the total value of the corresponding means of production, including "waiting" or the "use" of capital.

This way of stating the problem departed sharply from previous approaches, such as the interest theory of Carl Menger (1871, pp. 133ff.), which were based on the premise that there was a fundamental equality between these two values. Whereas in Menger's eyes, interest was the value of a component part of the factors of production, Böhm-Bawerk saw it as the fruit of a value differential. He described this value differential, which Frank Fetter would later name time preference, in the following way: "*Present goods have in general greater subjective value than future goods of equal quantity and quality.*"[2] It is because of this fundamental time preference of present goods over future goods that factors of production (which will yield some quantity of product X in the future) are less valuable than the corresponding quantity of X existing already here and now.

Let us observe that the time preference explanation of interest transcends the phenomenon of a value spread between products and their factors of production. It makes a more general claim on behalf of any two homogeneous goods situated at different points of time, irrespective of whether they are related through a production process. Böhm-Bawerk (1921b, p. 219) emphatically denied that time preference was rooted in "the general relationship between the value of means of production and the value of their products." And Frank Fetter (1915, p. 236) similarly insisted that time preference referred to "present goods as compared with an equal amount of the like future goods." And despite various disagreements with Böhm-Bawerk, all later champions of time preference theory—in particular, Mises and Rothbard—would also agree that interest was a value differential between a "sooner" and a "later" good. From the point of view of time preference theory, the value spread between products and factors of production is therefore always mediated by the more fundamental value spread between presently available products and like products that will come into being in the future due to the factors of production.

As can be seen from Böhm-Bawerk's cautious definition, which stresses that only "in general" present goods are preferred over like future goods, he did not assert that time preference was universally positive. Neither did Irving Fisher (1907, p. 184) and Frank Fetter (1977a, p. 238f.; 1915, p. 237) think this was the case (they even argued that time preference could be negative), and several contemporary Austrians advocate the same point of view (see Kirzner 1993, p. 171, Lewin 1999, pp. 103ff.).

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[1]For recent criticisms of the Austrian time preference theory, see Pellengahr (1996) and Reisman (1996, pp. 792-97). For previous expositions and defenses of time preference theory, see in particular Böhm-Bawerk (1921b, 1928), Mises (1998, pp. 99ff., 476-534), Rothbard (1977; 1987; 1993, pp. 11ff., 297ff., 313ff.), Kirzner (1976, 1993), Block (1978), and Garrison (1979, 1988).

[2]Böhm-Bawerk (1959, p. 265, emphasis in the original). See also Böhm-Bawerk (1921b, p. 327) and Böhm-Bawerk (1959, p. 259).

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By contrast, Ludwig von Mises (1998, pp. 480ff., 524) asserted on *a priori* grounds that time preference was at all times and places positive, and several later Austrians (for example, Rothbard, Block, Garrison, Hoppe, Herbener) followed him in this stance. Mises stressed that human action by its very nature involves a preference for a sooner rather than a later fulfillment of one's ends. Said Mises:

> acting man does not appraise time periods merely with regard to their dimension. His choices regarding the removal of future uneasiness are directed by the categories sooner and later. . . . Satisfaction of a want in the nearer future is, other things being equal, preferred to that in the farther distant future. Present goods are more valuable than future goods.
>
> Time preference is a categorical requisite of human action. No mode of action can be thought of in which satisfaction within a nearer period of the future is not–other things being equal–preferred to that in a later period. The very act of gratifying a desire implies that gratification at the present instant is preferred to that at a later instant. He who consumes a nonperishable good instead of postponing consumption for an indefinite later moment thereby reveals a higher valuation of present satisfaction as compared with later satisfaction. (Mises 1998, pp. 480-81)

Here Mises not merely clarifies the phenomenon that his predecessors had in mind when they used the expression "time preference," rather, he gives a complete restatement of time preference theory in regard to two fundamental points. First, he redefined what time preference theory was all about; the "time preference" he was dealing with was not in fact the same phenomenon that Böhm-Bawerk and his other followers had studied. Second, Mises gave a causal explanation of time preference that differed from the one given by Böhm-Bawerk. In what follows we will discuss these restatements in some detail, dealing first with Mises's explanation of the origin of time preference, and then turning to a critique of his time preference theory itself.

The Consumption Theory of Time Preference

For both Böhm-Bawerk and Mises, time preference was only the *proximate* cause of interest. The *ultimate* cause was something even more fundamental.

Böhm-Bawerk (1921b, pp. 328ff.) had famously argued that time preference was itself caused by two psychological dispositions of man, namely, (1) that current needs are usually less well-satisfied than future needs, and (2) that human beings tend to underestimate future needs. He also argued that time preference was caused by the higher physical productivity of more roundabout methods of production–his famous "third cause" of time preference.

Mises (1998, p. 486) accepted Frank Fetter's refutation of this third cause as definite. But he also rejected Böhm-Bawerk's two psychological explanations. Psychology, Mises argued, could never establish that time preference was an element of the very nature of human action. In some actions, the psychological forces that Böhm-Bawerk described were at work and led to a preference of present over future goods of the same kind. But in other instances, this was not the case. Böhm-Bawerk himself had admitted this point, which is why he held that time preference existed only "in general" but not in all cases of human action.[3]

Mises followed Frank Fetter and Franz Čuhel in arguing that time preference was caused by the necessity of consumption.[4] Fact is that human beings could not survive if they did not consume. Hence, there must be some time preference in human action,

[3]See Mises (1940, pp. 439ff.). Mises (1949, pp. 485ff.) also criticized Böhm-Bawerk for having failed to develop a truly praxeological theory of the period of production.

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lest the human race would perish. This does not mean that human beings must consume through every single action, so that time preference would be the only factor determining their actions. Rather, it means that in order to survive human beings must, at some point, prefer shorter production processes to longer ones, even though the longer ones are more physically productive.

Consider three alternative fishing processes: the first one leads to catching one fish at the end of a one-hour production process, the second to catching 10 fish at the end of a full work-day (eight hours) production process, and the third to catching 100 fish at the end of a one-week production process. Mises (1940, p. 446; 1949, p. 483) argues that, if one disregarded the need for survival through time, in light of these production figures one would always choose the longest production process. It is the need to survive that prompts the acting person to also consider the passage of time and to prefer, at some point, sooner results to later ones. Thus assume we observe a person pursuing the production process leading to a catch of 10 fish at the end of a day. Mises explains this observation in the following way: The person did not pick the 100-fish alternative rather than the 10-fish alternative because his time preference was stronger than the additional gain (90 fish in six days) he could expect from the longer production process. The only reason why he picked the 10-fish alternative at all, rather than the one-fish alternative, was that, in this case, the attraction exercised by the additional gain (nine fish in seven hours) was strong enough to overcome his time preference.

Before we set out to criticize this standpoint, let us briefly highlight its significance within the overall theoretical framework of Misesian economics. Consumption here appears as the root of all economic phenomena. Carl Menger and his disciples had argued that consumer choices directly determine the prices of consumers' goods, and that indirectly they also determine the prices of producers' goods. Now in light of the Fetter-Čuhel theory, time preference too, and with it the phenomena of capital and interest appeared to be rooted in consumption. Its great charm—at any rate from Mises's point of view—was that it did not stress any psychological dispositions of man, but relied on the fundamental (praxeological) fact that there can be no human action without consumption. The consumption-theory of time preference thus seamlessly integrated the theory of capital and interest into the general theory of prices.

This being said, we now have to address the shortcomings of the consumption theory of time preference. Let us first observe that this theory does not warrant Mises's characterization of time preference as a universal feature of human action. As we have seen in the long quote above, Mises held that time preference was at work in every single human action. But then he goes on to causally explain time preference by the necessity, at some point at least, for man to consume in order to assure his survival. Now, as a matter of fact there are human actions that are not inspired by the desire to survive. Warriors and martyrs, for instance, have the tendency to be oblivious of the physiological requirements of sustained life. The same holds true for those striving for suicide. Yet it also holds true for many people who cherish life, but are ready to give it up if this is required for the protection of some good they believe is higher than their life. Mises recognizes this fact only to dismiss it as "a pathological withering away of vital energy" (1949, p. 487). From a praxeological point of view, however, it is of secondary importance whether an action has a pathological character. We first have to deal with the action as it is, not as it should be from the point of view of physiology or psychology. And here we cannot evade the fact that not all actions are inspired by a desire for survival. It follows that the consumption theory of

[4]See Mises (1940, p. 443f.) where he quotes Fetter (1905, p. 144) and Čuhel (1907, p. 304). For an earlier statement of this argument, see Mises (1933, p. 23f.).

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time preference does not apply to all human actions, and that it therefore cannot justify Mises's claim that time preference is a universal feature of human action.

This consideration does not however refute the time preference theory of interest, and not even the consumption theory of time preference. Even if there were no universal link between consumption and time preference, interest could still be caused by time preference and the need for consumption could determine interest in some more indirect way. Mises himself does not seem to believe that the consumption theory of time preference describes a matter of fact that is as obvious, say, as the fact that acting man chooses between alternatives or that he employs means to attain ends. Rather, the consumption theory is in Mises's eyes the most plausible hypothesis to explain the fact that we do not always choose those production processes that are most physically productive, and that we choose production processes yielding fruit in the future only if the quantity of the future product is higher than the quantity we own now. In his words:

> Those contesting the universal validity of time preference fail to explain why a man does not always invest a sum of 100 dollars available today, although these 100 dollars would increase to 104 dollars within a year's time. It is obvious that this man in consuming this sum today is determined by a judgment of value which values 100 present dollars higher than 104 dollars available a year later. But even in case he chooses to invest these 100 dollars, the meaning is not that he prefers satisfaction in a later period to that of today. It means that he values 100 dollars today less than 104 dollars a year later. (Mises 1949, p. 483)

If the consumption theory of time preference were wrong, and even if time preference theory itself were altogether wrong, it is true that we still would have to explain the facts Mises describes in the above quote. But we must also stress that these facts do not themselves prove the validity of any particular theory. They are facts-to-be-explained, not facts that deliver their own explanation. And as we are going to show in the later sections of the present article, there is at least one other theory that can also account for these facts.

The greatest shortcoming of Mises's argument, however, is its reliance on the fallacious notion that 104 future dollars are somehow *inherently more valuable* than 100 dollars in the present. It is true that he does not make this notion explicit. But it is implicit in the very way he formulates the problem: "Those contesting the universal validity of time preference fail to explain why a man does not always invest a sum of 100 dollars available today, although these 100 dollars would increase to 104 dollars within a year's time." Mises thus feels a need to explain why a man should not always prefer the more physically productive choice alternative in the future to a less physically productive alternative in the present. But such a need can only arise if one assumes that the natural thing would be to always prefer the former to the latter alternative. Were it not for the intervention of something like time preference, 104 dollars in the future would always and everywhere be preferred to 100 dollars now.

This view confuses the physical aspect of things with the economic (value) aspect. It is true that 104 dollars are from a physical standpoint more than 100 dollars because the former are a larger multiple of the same physical unit. But from the economic point of view, this comparison is irrelevant. Economic comparisons are not cast in terms of physical units, but in terms of choice alternatives, and choice alternatives are always heterogeneous. In the present case, therefore, the economic comparison does not involve different multiples of the same good, but two different goods. "104 dollars in one year" are for purposes of decision-making a good that is completely different from "100 dollars now" even though from a physical point of view these might be homogeneous quantities. Therefore there is no reason to assume that 104 future dollars are inherently preferable to 100 present dollars. The entire problem that Mises seeks to

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solve through the hypothesis of time preference evaporates. All we can say is that some people prefer 104 future dollars to 100 present dollars, whereas other people have other preferences. There is nothing in this fact that would justify introducing the hypothesis of time preference and, therefore, of taking the pains to explain time preference as a consequence of the need to consume.

Böhm-Bawerkian Time Preference and Misesian Time Preference

So far we have mainly discussed Mises's causal explanation of time preference, and only our very last considerations have brought us closer to a critique of his time preference theory *per se*. Before we can proceed with this task, however, we have to discuss the particular features of Mises's time preference theory as compared to the time preference theory of Böhm-Bawerk.

The Böhm-Bawerkian view on the nature of time preference involved two related shortcomings. On the one hand, it was difficult to reconcile with the fact that values and prices are manifest in human choice and that choice is free. How, then, is it that future values by their very nature—or at least in general—stand in a determinate relationship to present values? On the other hand, and more important, the Böhm-Bawerkian approach ran into even greater conflict with the theory of subjective value insofar as it claimed that time preference concerns the value differential between *homogenous* present and future goods. The very fact, however, that two goods exist at different points of time makes them heterogeneous goods. Böhm-Bawerk (1921b, p. 327) himself admitted this implicitly when he emphasized that the value of present and future goods is liable to be different because they "are intended for a service of a different set of wants." And later champions of Misesian time preference theory have routinely stressed the same point in rebutting various criticisms of the doctrine (see, for example, Rothbard 1993, p. 61; Block 1978, pp. 121f.). The point is devastating for the old time preference theory, for one cannot even make claims on behalf of present and future goods "of the same economic quality" without contradicting oneself.[5]

[5]We have already seen that Mises did not quite avoid this fallacy either. In any case, one could argue that two physically equal goods existing at different points of time are also equal from an economic point of view, *except for* their position in time. There are three problems with this argument. First, it does not explain why future goods should not be preferred to present goods. Second, it is not really an argument but a stipulation. It "demonstrates" the existence of time preference by postulating that the relative position in time is the only factor that could prevent two physically equal goods from having the same economic significance. But this is clearly not the case because even two physically equal goods that exist at the same point of time and are owned by the same person also have different values (see Mises 1998, p. 119f.). Third, the argument seems to presume that, except for their different position in time, two physically equal goods would have *equal* values. But this contradicts the standard Austrian case against the existence of indifference in human action (see, for example, Rothbard 1956 and Hülsmann 1999). Pellengahr seemed to have this point in mind when he stated that

> it is left entirely unclear how the evaluating agent is to separate his decision with respect to the equality of the satisfactions from the decision as to which satisfaction he prefers. The task is simply too difficult for anyone to perform: either two satisfactions, one present, one future, are considered equal or not. They cannot, qua satisfactions, be considered equal in one respect and unequal in another. A concept of time preference defined with respect to equal present and future satisfactions, however alluring it may seem to subjectivists at first glance because of its apparent subjectivism, is thus simply a contradiction in terms. (Pellengahr 1996, p. 26–27)

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In the hands of Mises's predecessors, then, time preference theory was a mere—and problematic—assertion that a determinate relationship between the values of future and present goods of the same kind existed. None of its champions proposed a tenable explanation for this supposed relationship other than the intuitive reference to the visible facts of the market: that the (future) prices of products were higher than the (present) prices of the corresponding factors of production. But these facts are to be explained by interest theory; they cannot themselves be their own explanation.

So how does Mises solve these problems? We already pointed out that he redefined time preference to such an extent that, properly speaking, he does not deal with the same phenomenon as Böhm-Bawerk and the other advocates of time preference theory, but with a different thing (see Moss 1987, p. 161; Pellengahr 1996, p. 27). When Böhm-Bawerk, Fetter, and Fisher used the expression "time preference," they referred to an observable value differential between two physically similar goods existing at two different points of time. But when Mises uses the expression "time preference," he refers to a *counterfactual* value differential between two alternative uses of one and the same good. Consider again the crucial passage from *Human Action* that we already quoted:

> The very act of gratifying a desire implies that gratification at the present instant is preferred to that at a later instant. He who consumes a nonperishable good instead of postponing consumption for an indefinite later moment thereby reveals a higher valuation of present satisfaction as compared with later satisfaction. (Mises 1998, p. 481)

Time preference thus concerns the value differential between that use of the good that comes to be realized in the present, and an alternative future use of this good that could have been realized if a different choice had been made.[6] When I use a good now rather than later, I demonstrate that I prefer to use the good now rather than later. And this in turn means nothing but that the value of its present use is higher for me than the value of the use I could also have made of it in the future. Emphasizing this fact, Mises elegantly sidesteps the fallacious notion that present and future goods that are physically identical are also of the same kind from an economic point of view. Counterfactual time preference concerns the value differential between two different uses of the same good—the "sooner" use being factual, while the "later" use is counterfactual. This value differential springs from the fact that both uses are compared in one and the same choice. Thus the counterfactual approach gives a realistic and *a priori* explanation of why positive time preference is a universal feature of human action.

Let us reinforce Mises's point by a somewhat more detailed demonstration. Consider three related and undeniable facts. First, all actions are located in specific circumstances of time and place. Second, all human actions bring about effects that occur at specific times and at specific places in the future. This holds true irrespective of whether the acting person intends these effects. *A fortiori*, then, and third, all effects that human beings do intend to bring about (their ends) are also located in specific times in the future. In light of this, the mere fact that one does what one does right now rather than later implies that one *prefers* to have one's end achieved sooner

[6] As the foregoing quote from Mises shows, he understood time preference in more narrow terms, namely, as the specific value differential between present *consumption* and counterfactual future consumption. In our exposition, we will present time preference as relating to the general value differential between any *use* of any given good and its counterfactual future uses. This generalization is however faithful to the nature of Mises's argument and does not affect the validity of our critique.

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rather than later. In Mises's (1998, p. 481) words: "The very act of gratifying a desire implies that gratification at the present instant is preferred to that at a later instant."[7] If I want to eat a sandwich in five minutes I have to prepare it now rather than in two hours or in two years. If I therefore prepare a sandwich now, I demonstrate thereby that I prefer having my sandwich in five minutes rather than in two hours or in two years. That is, I have a time preference for having the sandwich sooner rather than later. Time preference in this sense is given in any single human action. And because it relates the visible part of an action to a counterfactual part of it, it is a truly *a priori* feature of human action.

The argument seems to be impeccable. Mises rightly states that the very fact that one chooses the good A demonstrates that a sooner use of A is preferred to a later one. Time preference in this sense exists (whereas time preference in the older sense does not exist) and is indeed a universal feature of human action. So what is wrong with the theory?

Its great shortcoming is that it does not explain the difference between the price of a product and the sum of the prices of its factors of production, that is, it does not solve the fundamental problem at stake in interest theory. While Mises's time preference theory is valid as far as it goes, it does not explain the origin of money interest, and therefore it can at best be a secondary element of the theory of interest.[8]

Time preference concerns a value differential between an observed present use of a good and its counterfactual future (alternative) uses. The fact that we use a good right now always involves a time preference for this present use as compared to possible—but unrealized!—future uses of the same good. Hence, while time preference is an intertemporal aspect of each observed human action, in each single case it explains only the action under consideration. That is, it explains only *one* action. Money interest, though, as it is observed on the market results from at least two actions: purchase of means of production *and* sale of products; granting of credit *and* payment of principal and interest. The problem of interest theory is therefore to explain a particular relationship between at least two actions. Yet this is something that time preference by its very nature cannot do.

Consider the case of a manufacturer producing car motors. In the present, he buys the pieces that need to be assembled and he rents the labor necessary for the assembling job, say, for 100 ounces of gold. In the future, he sells the finished motors at a price exceeding his previous expenditures, say, for 140 ounces of gold. Referring to time preference, then, we can explain his present behavior by stating that he prefers to have the motors assembled sooner rather than later, and we can explain his future behavior by stating that he prefers to realize his selling proceeds sooner rather than later. These explanations do not however address the problem of interest, namely, why the selling proceeds exceed the expenditures for factors of production. The best evidence for this contention is that we can use time preference to explain the manufacturer's actions irrespective of the prices at which he buys and sells. Thus assume he sells the finished motor for 90 ounces of gold; this would not change anything to the way we apply time preference theory. We would still say that he prefers to realize his selling proceeds rather sooner than later, even though in this case there is no positive spread between buying prices and selling prices. In other words, we have successfully applied Mises's

[7]See also Block (1978, p. 122), Garrison (1979, pp. 143, 145f.), and Rothbard (1987, p. 646).

[8]Pellengahr (1996, pp. 41, 47) already pointed out that it is unclear to which extent Mises's theory of time preference explains market interest payments. Our following discussion confirms and reinforces this observation by arguing that Misesian time preference is in fact unrelated to market interest.

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time preference theory, but we still do not know whether there is anything in human action that, under certain conditions, causes any particular relationship between buying prices and selling prices.

Consider another example. Suppose you lend 100 ounces of gold for one year at an interest rate of 20 percent per annum. What does this mean in regard to time preference? It means that you want to own the sum of 120 ounces of gold sooner (i.e., in a year) rather than later (i.e., in more than a year). But it would also be the case if you lent the money at zero percent. It would even be the case at a rate of -10 percent. When I lend 100 ounces of gold now to receive 90 ounces in one year, I thereby demonstrate my preference for having these 90 ounces from my debtor sooner rather than later. It is true that it seems to be pointless to lend money at -10 percent. Why indeed should a man find it valuable at all to give up 100 ounces of gold now, only to receive a mere 90 ounces back at some point in the future? Why should he not just keep the money rather than make such a contract? These are of course very good questions, but Mises's time preference theory does not answer them.

Time preference, in the sense Mises understood this term, concerns the timing of achieving one's ends; it does not concern the question whether the ends achieved are important enough to justify the means. If I lend money at -10 percent, I achieve the ends that I thereby achieve sooner than if I do not lend the money now at this rate. Thus time preference is certainly at work here. By contrast, it is an entirely different question whether my lending at -10 percent prevents more important goals. This is not to deny that there are forces at work that tend to prevent negative interest rates in credit contracts, and which even tend to prevent interest rates from ever falling to zero. Our point is merely that these forces have nothing to do with time preference in the Misesian sense.

To sum up, Mises's time preference theory of interest does not explain why there should be, under any set of circumstances, a systematic relationship between time preference on the one hand, and the spread between selling receipts and cost expenditure on the other hand. It does not explain why the interest rate should *ever* be positive rather than zero or even negative. It does not even get to the point of explaining why interest does not tend to become eradicated through entrepreneurial competition. And it therefore does not give us any reason to believe that there is a factor that systematically causes interest rates to be positive. By its very nature, Misesian time preference *cannot* account for price spreads. It can only account for the value differential between the actual use of a good and the counterfactual (unrealized) future uses of the same good.

Originary Interest

The Phenomenon of Originary Interest

Before we set out to explain the real cause of the spread between the value of a product and the sum-total of its means of production, let us briefly explain the point at which our approach departs from the time preference theory of our predecessors.

Böhm-Bawerk's great achievement was to formulate interest theory as a problem of value inequality rather than, for example, as a problem of physical production. He argued that interest payments on the market ultimately sprang from a fundamental value spread between two different classes of goods. He called this fundamental value spread, in which all manifestations of interest have their origin, *ursprünglicher Kapitalzins* or originary interest.[9] In light of this approach, then, the problem of

[9]See Böhm-Bawerk (1921a, p. 6). Mises (1940, p. 476) used the terms *Urzins* and originary interest in a slightly different sense, namely, as a ratio rather than as an absolute "surplus." He

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interest theory is to come up with such a classification of all goods, into two classes, that originary interest results from *the very nature* of each of the two classes. Otherwise no universal claims about interest could be made. So far, I think, the argument is not objectionable.

Now, Böhm-Bawerk thought the relevant classes were "present goods" and "future goods." Throughout his work he championed the idea that a present good by its very nature is, in general, more valuable than a future good, and all of his successors maintained the same fundamental view that the difference between a "sooner" and a "later" was the source of interest, and they elaborated and refined this view without fundamentally questioning it. By contrast, those who were skeptical about time preference theory tended to throw out the interest-as-a-value-inequality-problem baby with the time-preference-theory bath water, and as a consequence fell back into variants of the untenable productivity theory of interest.

The theory we are going to present now is an attempt to build on Böhm-Bawerk's formulation of the problem of interest, though, without following his lead when it comes to the solution of this problem. Our theory contains no fictitious stipulations or imaginary constructs. Rather, it is a realist description of certain immutable aspects of human action.

The phenomenon we will call originary interest is a particular type of the familiar value spread that exists between different choice alternatives. In making his decisions, man demonstrates his preferences. He prefers what he does to what he could have done instead. This value spread is present in all human actions: the action performed is more valuable, in the eyes of acting man, than the unrealized alternative actions. It is true that it is a value spread *ex ante* and that the acting person might find, *ex post*, that he has erred in his valuation. But this does not affect the truth that there is for the acting person always a spread between the value of what he does and what he could have done.

The general value spread we just described exists in all forms of human action. It is independent of time and place. It even exists independent of any particular social setting since it occurs in Crusoe economies as well as under modern capitalism. Its intertemporal aspect is time preference in the Misesian sense: In choosing, man prefers what he does here and now to performing the same action at a later point of time. As we have seen, however, time preference is not the source of interest. We must therefore turn now to a more particular variant of the general value spread that exists between choice alternatives, namely, a value spread that springs from the fact that man chooses *means* and *ends*, and that he uses the chosen means in the pursuit of his chosen ends.[10] Here it is all-important to stress the somewhat trivial point that the purpose of employing a means can only be to attain the end. The end is what really counts for the

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(1998, p. 523) defined it as "the ratio of the value assigned to want-satisfaction in the immediate future and the value assigned to want-satisfaction in remoter periods of the future."

[10]Past discussions of the relationship between ends and means in the Austrian literature have heavily focused on stressing that the choice of means is an emanation of human subjectivity (here understood in the sense of "arbitrariness"). They point out that a "means" is *any* object that in the mind of the acting person is an economic good. For example, the wooden figure adored in a rainforest cult is, in the eyes of the adherents to the cult, a means to get in touch with their god, even though no such mediation takes place objectively. And most inhabitants of modern civilized countries consider government to be a means to maintain civilization, even though government's objective function is a different one. Yet, irrespective of how ill-founded the belief in the objective properties of a means is, the fact is that when people deal with "imaginary" means they value them just as if they were "real" means. All economic laws apply therefore to the actions of these people; economic science can account for their subjectivity. For early expressions of this point see Bastiat (1851, pp. 125, 129) and Mises (1933, pp. 160ff.). For the distinction between real and imaginary wants, see Menger (1923, pp. 4f.).

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acting person, whereas the means is merely the thing or the action that is in between his present state of affairs and the state of affairs in which his end is realized.

Amazingly, this simple and obvious fact has an important implication for the theory of value and interest that has apparently been overlooked in the literature on interest theory. For it follows from this fact that, by their very nature, ends have, in the eyes of the acting person, a higher value than the corresponding means. Clearly, if an acting person could choose between either having his end realized or having the means to attain it, he would choose the end. This is a direct implication of the very nature of ends and means. One cannot even conceive of choice being different without running into contradictions. If a means is ever chosen, then the only purpose of this choice is to attain the end it serves. The very nature of a means implies that it is not sought for its own sake. Its value necessarily ranks below the value of the end, and the means would have no value without the end it serves.

We are thus in a position to give a realist definition of originary interest, which is the phenomenon that lies at the heart of all manifestations of interest on the market and in any other form of social organization. *Originary interest is the fundamental spread between the value of an end and the value of the means that serve to attain this end.*

Below, we will examine in more detail how and under which conditions originary interest gives rise to the spread between the prices of products and the sum-total of the prices of their factors of production; and thus how and under which conditions originary interest also gives rise to money interest paid on financial markets. At this point, let us merely highlight the fact that our theory of originary interest appeals to common sense.[11] Even without taking any closer look at money prices and other particularities of the market, the idea that there is a positive spread between the values of ends and means is intuitively plausible. For example, it is plausible to hold that the unassembled pieces required for the production of a motor, plus the labor necessary to assemble these pieces into a motor, are not as valuable as the motor itself. This holds true irrespective of the prevailing form of social organization; market prices here merely reflect the underlying fundamental value spread. It is because of originary interest, which transcends the market, that the price sum of the labor and of the unassembled pieces is lower than the market price of the motor.[12] Except where gifts or malinvestments are involved, costs of production are therefore always and everywhere lower than the proceeds from production. And workers are never paid "the full value of their product," but the *discounted* value of their product–discounted, that is, because of the ubiquity of originary interest (see Block 1990, pp. 199-207).

In short, in light of our theory of originary interest, it would seem that the market phenomenon of money interest is rooted in the very nature of means and ends.

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[11]It is also reflected in common language, for example, in statements such as "this is an interesting project" or "I am interested in buying this car." Similarly, the French use expressions such as *ça n'a pas d'intérêt* or *je m'interesse pour cette voiture.* In the *Wealth of Nations* we find a revealing passage, in which Adam Smith explains the necessity of a "profit" (that is here: interest) component in price. The capitalist who invests his money to employ workers, Smith says,

> could have no interest to employ them, unless he expected from the sale of their work something more than what was sufficient to replace his stock to him; and he could have no interest to employ a great stock rather than a small one, unless his profits were to bear some proportion to the extent of his stock. (bk. I, chap. VI, p. 54)

[12]This holds true, of course, only for those cases in which the labor and the pieces can *only* be used for the production of motors, and not be enjoyed for their own sake. Still it is true that *that* part of their value or prices, which depends on their usefulness for the production of motors, is inferior to the value or price of the motor.

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Because of originary interest, certain investment projects feature a price spread between costs and selling prices that cannot be "arbitraged away." And it is therefore that entrepreneurs *can* pay interest on money credits they receive. They *have* to pay money interest because any credit they receive is but a means for the creditor to obtain a larger quantity of money in the future.

Value Imputation Theory Versus *Originary Interest*

The existence of a value spread between means and ends is such a simple and obvious fact that we have to wonder why it has been overlooked so far. The discussion of this question will serve to further refine our definition of the phenomenon.

One of the main reasons why originary interest, understood in our sense of a value spread between means and ends, has been overlooked is that it did not square with mainstream views on value and value imputation. Unfortunately, the Austrian School until Mises was in this regard part of the mainstream. The weight of tradition prevented even Mises from developing the right theory of interest, even though he provided the foundations of our present work through his value theory, which decisively improved on Carl Menger's approach.

Menger (1871, pp. 141f.; 1976, pp. 164f.) held that the value of any unit of a higher-order good is *equal to* the value of that unit of a lower-order good that would not come into existence without the intervention of the higher-order good:

> the value of a concrete quantity of a good of higher order is equal to the difference in importance between the satisfaction that can be attained when we have command of the given quantity of the good of higher order whose value we wish to determine and the satisfactions that would be attained if we did not have this quantity at our command. (Menger 1976, p. 165)

Thus the value of the lower-order good is fully imputed on the higher-order good. According to Menger, there is therefore a perfect equality between the value of consumers' goods (the goods of the lowest order) and the cumulative value of all higher-order goods needed for the production of the former.

There is no need here to go into a detailed refutation of this view. Suffice it to say that value imputation theory cherishes a cardinal rather than an ordinal notion of value. But value is nothing but the name we give to the relative superiority or relative inferiority of one thing as compared to the relative superiority or relative inferiority of other things, from the point of view of acting man. Human choice by its very nature involves preference for the things that the acting person does—more precisely, it involves preference for certain things over other things that the person also could have done, but did not do because of the very choice he made. We express the same fact in different words when we say that the things he does have a higher value for him than the things he does not do. The value of a thing, understood in this fundamental sense, can therefore never be equal to the value of another thing. It is *either* higher *or* lower than the value of the other thing. It follows that the value of a higher-order good cannot be equal to the value of the lower-order good that the higher-order good helps bring into existence. The two goods must necessarily be unequal in value (see Mises 1933, chaps. 4–7; 1998, passim).

From the point of view of Menger's theory of value imputation, the very question of a value spread between means and ends could not possibly arise. And the authority of his opinion effectively prevented the question from arising from his disciples in subsequent generations—a case of intellectual path-dependency. After Menger, several generations of Austrian economists have elaborated value imputation theory with loving care. The most eminent value imputation theorists were Friedrich von Wieser (1924) and his disciples (Hayek wrote his doctoral dissertation on imputation theory). But traces of this theory seem to subsist even in Ludwig von Mises's *Theory of Money*

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and Credit. In a discussion of one of the main tenets of Wieser's theory of the value of money, Mises (1980a, p. 183) brings up the following case:

> Let us suppose that the scale of values of the possessor of an apple, a pear, and a glass of lemonade, is as follows:
>
> 1. An apple
> 2. A piece of cake
> 3. A glass of lemonade
> 4. A pear
>
> If now this man is given the opportunity of exchanging his pear for a piece of cake, this opportunity will increase the significance that he attaches to the pear. He will now value the pear more highly than the lemonade.

It is true that this passage is no clear-cut evidence that Mises championed value imputation theory. Mises does not actually say that the value of the goal of the exchange (the piece of cake) is fully imputed on the means (the pear); he just says that the exchange opportunity will increase the significance of the pear, to the point that the value of the pear will now be higher than the value of the glass of lemonade—but not necessarily equal to the value of the cake.[13]

But since we are not concerned here with the history of ideas, let us simplify the whole question and assume, for the sake of argument, that Mises, at least occasionally, did champion value imputation and that he therefore believed there was no value spread between means and ends. In this case, we would have to make two objections. First, Mises would be wrong because as a matter of fact there is a value spread between means and ends. Second, value imputation theory cannot be reconciled with Mises's own work on the problem of economic calculation, the point of which is precisely that there is no such thing as value calculation; there is only monetary calculation. The reason is, as Mises himself highlighted in the *Theory of Money and Credit*, that values are never equal (and thus potential elements of mathematical equations); rather, one value is always higher or lower than other values. This is in the very nature of value, as Mises emphasizes in the same discussion of Wieser's theory from which the above quote is taken. He says:

> But if one good is placed higher, then—there can be no question of it—some other must be placed lower. This arises simply from the very nature of the scale of values, which constitutes nothing but an arrangement of the subjective valuations in order of the significance of the objects valued. (Mises 1980a, pp. 183f.)[14]

To sum up, one of the main reasons why the phenomenon of originary interest has been overlooked was that economists—even the economists of the Austrian School—have

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[13]Other passages of the *Theory of Money and Credit* seem to provide more clear-cut evidence for Mises's views on value imputation. In particular, Mises asserts that "the subjective use-value of money, which coincides with its subjective exchange value, is nothing but the anticipated use-value of the things that must be bought with it" (1980a, p. 130). Essentially the same statement can be found on p. 119, where Mises approvingly quotes Wieser on this issue. And in *Human Action*, Mises (1998, p. 332) states that it "is permissible to declare that, due allowance being made for time preference, the value attached to a product is equal to the value of the total complex of complementary factors of production."

[14]See also Mises (1980a, pp. 51ff.).

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been misled by the chimerical notions of cardinal value and of value calculation (in neoclassical economics: cardinal utility and utility calculation). Mises was least affected by these fallacies and he entirely discarded the notions of cardinal value and of value calculation in his theory of value and in his theory of economic calculation; but he did not realize that his value theory opened a new perspective on the phenomenon of interest.

Originary Interest Distinguished From Gain

Another important reason why originary interest, understood in our sense as a value spread between means and ends, has been overlooked is that it is easily confused with two other phenomena, namely, on the one hand, the phenomenon of gain and, on the other hand, with the twin phenomena of entrepreneurial profit and entrepreneurial loss.

Let us first deal with the phenomenon of gain. This is the value spread that exists, at the moment of choice, between, on the one hand, the *value of the end* of the chosen course of action and, on the other hand, the *value of the end* of the second-best course of action, which has not been put into practice. It should not be controversial that there is such a value spread. Human action involves the use of means to attain ends, and the very reason why an acting person chooses to pursue one end rather than another is that he believes the former end is more valuable than the latter. The point we need to stress here is that the value spread we call "gain" is a value spread between two *alternative ends*. This is what sets it apart from originary interest, which is the value spread that exists between one end and its corresponding means.

Suppose Brown owns a beautiful garden and Black owns a well-equipped kitchen. They agree to exchange the garden for the kitchen. Brown thus uses his garden as a means to buy another means (the kitchen), which will allow him to attain the end he seeks: many nice meals. Similarly, Black uses his kitchen as a means to buy another means (the garden), which will allow him to attain the end he seeks: many nice evenings enjoying the flowers. What prompts each of them to make the exchange is the prospect of gain. Brown expects to gain from it because for him the meals have a higher value as compared to the value of contemplating the flowers; and *vice versa* in the case of Black. After the exchange, and unless they discover they made an error in judging what was really the most important thing for them to do, they will indeed have gained in the sense that each of them is now better off than if Brown had decided to keep the garden and Black to keep the kitchen. But gain is only one of two value spreads that manifest themselves in this situation; the other one is originary interest. For Brown, the garden (the higher-order means) was less valuable than the kitchen (the lower-order means), and the kitchen was less valuable then the meals (the end); again, the same thing holds *mutatis mutandis* for Black.

The difference between gain and originary interest seems to be quite patent, so why do the two tend to be confused? The confusion arises, again, from the fallacious notion of value imputation, which implies there is no value spread between means and ends. If means and ends have the same value, the phenomenon of originary interest so-to-say disappears from the conceptual radar screen. All that remains is a very broad concept of gain. We find a statement of this view in *Human Action*.[15] Mises starts off characterizing action as an exchange:

> Action is an attempt to substitute a more satisfactory state of affairs for a less satisfactory one. We call such a willfully induced alteration an exchange. A less desirable condition is bartered for a more desirable. What gratifies less is abandoned in order to attain something that pleases more.

[15]See also the corresponding passage in Mises (1940, pp. 75f.).

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Then he proceeds to a definition of price and costs—a definition that skips the difference between means and ends:

> That which is abandoned is called the price paid for the attainment of the end sought. The value of the price paid is called costs. Costs are equal to the value attached to the satisfaction which one must forego in order to attain the end aimed at. (Mises 1998, p. 97)

Notice in particular the ambiguity of the expression "that which is abandoned." In a Crusoe setting, decision-making involves abandoning certain ends in favor of the end aimed at, but it does not involve abandoning any means of action. The price paid is therefore purely defined in terms of forgone ends, and the costs of the decision are opportunity costs defined as the value of the forgone ends. By contrast, in market exchanges, one does not only abandon ends, but also means, and as a consequence we here pay a price and incur costs *in two senses*. One might take account of this fact by calling the price paid in form of forgone ends "praxeological price" or just "price" while calling the price paid in form of abandoned means "market price." Similarly, we may call the value of the forgone ends "opportunity costs" and the value of the foregone means "costs." The important thing to stress, however, is that opportunity costs are not equal to costs; rather, costs are lower than opportunity costs because of the value spread between means and ends, which also exists between the means and ends of forgone choice alternatives.

Because he does not make these distinctions, Mises ends up with a definition of gain that brushes over the difference between the phenomenon of gain, as we have described it above, and the phenomenon of originary interest. "The difference between the value of the price paid (the costs incurred) and that of the goal attained is called gain or profit or net yield."[16] As a definition, this is of course unobjectionable. But it does not alter the fact that there is a value spread between alternative ends ("gain" in our definition) and another value spread between the means and the end of each choice alternative (originary interest).

The distinction between gain and originary interest is useful because it enables us to understand market interest rates better than we would understand them in the light of other theories. But the difference between originary interest and gain is important even outside the traditional confines of interest theory. In particular, our theory of originary interest also gives a more satisfactory account of market exchanges than the standard economic explanation. According to the latter, market exchanges take place because both parties are likely to gain from them. When Smith exchanges his apple against Jones's tomato, the property title to the tomato is more valuable for Smith than the title to the apple, whereas for Jones it is the other way round. They both expect to gain from the exchange and therefore the exchange takes place. This is the standard account, and it seems to be impeccable. But once we restate the phenomenon again in terms of means and ends, we encounter a question that can only be answered by our theory of originary interest.

Smith seeks to attain his end (tomato) by means of his apple, and Jones uses his tomato as a means to acquire the apple. Why is it that for Jones the tomato is less valuable than the apple, and why is it that for Smith the apple is less valuable then the tomato? From the point of view of value imputation theory, this question cannot be answered. Advocates of this theory would have to hold that for Jones the tomato has

[16]Mises (1998, p. 97). The quote shows that he uses "profit" and "net yield" as synonyms for "gain." Other synonyms that he uses are "profit in the primary sense" (p. 97), "profit in the broader sense" (p. 286), as well as "profit in the original sense" (p. 287). In *Nationalökonomie*, Mises used the expressions *Gewinn* and *Vorteil* (1940, p. 75).

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the *same* value as the apple, because the value of the apple would be fully imputed to the tomato; and *mutatis mutandis* the same consideration would apply to the case of Smith. Thus, the exchange presents us with a paradox. Why would Smith and Jones engage in their barter if they do not value the price they pay less than the good they receive?

Our theory of originary interest delivers the common-sense answer to this question. Smith and Jones do not impute the value of their ends onto their means. Smith values his apple (means) *less* than Jones's tomato (end), and therefore he desires to make the exchange. Thus we see that *market exchanges are mutually beneficial because of originary interest.* The services given up in an exchange, and the exchange itself, are but means to enjoy services that one values more highly than those one surrenders. Again our theory of originary interest leads to a significantly different result than the time preference theory. The latter confines the phenomenon of an *agio* between means and ends to those cases in which the use of means and the attainment of ends do not coincide in time. But there is an *agio* between means and ends also in spot market exchanges–certainly not an ephemeral phenomenon. It follows that, even if time preference in some way determined money interest, it would not be the only determining factor, but merely one out of two causes operating to the same effect.

Originary Interest Distinguished From Entrepreneurial Profit and Loss

Let us now briefly turn to another phenomenon that should not be confused with originary interest, namely, to entrepreneurial profit and entrepreneurial loss, which Mises also calls monetary profit and monetary loss. In distinct contrast to the phenomena of originary interest and of gain, monetary profit and monetary loss are not value spreads, and they do not even result from value spreads. They are no value phenomena at all, but a special income component that results from errors in human decision-making (see Mises 1980b; 1998, pp. 286ff.). Such an error is given, for example, if Mr. Harris invests money in a shoe factory that yields less return than he could obtain with the same investment in a pasta factory. The difference between the return Mr. Harris receives from the shoe factory as compared to the return he could have received from the pasta factory is his entrepreneurial loss. Similarly, those who invest in pasta production realize higher incomes than they would have realized if Mr. Harris had also entered this business, because in this case he would have bid up the prices of the factors needed for pasta production, and his additional sales would have decreased the pasta market prices. The difference between their present incomes and the incomes they would have realized in case Mr. Harris had joined the pasta business is the entrepreneurial profit of these other men.

In light of these definitions we understand that entrepreneurial profit and loss must not only be distinguished from the value phenomenon of originary interest, but also from the price phenomenon of monetary interest. Interest is in fact an income component that cannot be eradicated through the competition of other market participants who successfully seek to improve their state of affairs, whereas profit and loss are income components that can be so eradicated. In other words, profit and loss do exist only due to entrepreneurial error, whereas interest comes into being irrespective of how many errors entrepreneurs make. The former are essentially disequilibrium phenomena while interest exists both in disequilibrium and in equilibrium.

MONEY INTEREST

Originary Interest and Money Interest

Having defined the phenomenon of originary interest as a value spread between ends and means, let us now turn to analyzing the conditions under which originary interest causes money interest.

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As a first step, we will review the manifestations that ends and means have in the realms of human psychology and of physical things. Notice from the outset that *only* ends and means have such manifestations. Originary interest itself does not have any manifestations in the realm of the objects of human action; it is not an object of action, but a feature of action itself. This is also why it is categorically different from money interest and must not be confused with it. It would be a grave error to believe that money interest is something like "originary interest become visible." Originary interest is as different from money interest as value differs from money prices.[17]

Money interest appears when ends and means are physically homogeneous to the point that one can calculate a quantitative difference between the two, that is, between monetary proceeds from selling a product and monetary expenditure for the corresponding factors of production. It is certainly tempting to believe that this visible quantitative price spread is some sort of "empirical evidence" for the existence of an underlying value spread between the means and the ends. But this is not the case. One cannot learn anything about originary interest by studying price spreads. The case is exactly the reverse: it is because we know what originary interest is that we understand that certain observable price spreads–or at any rate certain components of these price spreads–do not come into being by accident; but are the premeditated result of entrepreneurial action, and cannot be arbitraged away because no such arbitrage would be in the interest of any other market participant. It was therefore necessary that we first dealt with originary interest before turing, as we now do, to the analysis of money interest.

Originary interest does not merely exist in the actions of businessmen who make certain money expenditures for factors of production (means) to realize monetary selling proceeds for the corresponding products (ends). It also exists in household behavior in a monetary economy, in barter exchanges, and even in Crusoe economies. A closer look at these settings does not only demonstrate the ubiquity of originary interest. It also demonstrates that originary interest does not spring from the passing of time. It can exist in one single point of time, for example, in spot market exchanges. The following observations will therefore reinforce our critique of the time preference theory of interest, which asserts such a dependence of originary interest on the passing of time.

We will first deal with certain limiting cases in which means and ends are manifest in the same event, to the point that they become indistinguishable. Then we will turn to those cases in which means and ends can be distinguished although they coexist at the same point in time, and finally we will study various cases in which ends and means are situated at different points of time. Eventually we will be in a position to adequately deal with the question under which conditions money interest emerges.

Manifestations of Means and Ends at Single Points of Time

Every single human action involves the use of means to attain ends. We will not belabor this point, which has been sufficiently discussed in *Human Action* and other works of Misesian inspiration. But we need to stress that the universal presence of means and ends in human action does not imply an equally universal presence of originary interest. Rather, originary interest is only a universal feature of human *labor*, not of the larger phenomenon of human action.

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[17]The confusion is likely to occur because we use the same word–"interest"–to describe both a value phenomenon and a price phenomenon. We have encountered the same problem above when we discussed the difference between "profit" in the sense of "gain" (a value phenomenon) and "profit" in the sense of "entrepreneurial profit" (a price phenomenon).

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To illustrate this point, let us briefly consider those limiting cases of human action in which it is impossible to discern means and ends because both coincide in the *same* event. In these cases an activity is enjoyed for its own sake; human behavior is here not a means to an end different from itself, but its own end. We sometimes experience this coincidence of means and ends in one psycho-physical event when playing, walking, dancing, listening to music, discussing, writing, fighting, etc.[18] It is the experience of doing something for its own sake—playing for the sake of playing, dancing for the sake of dancing, etc. It is true that each of these activities is extended through time. But in each case the action itself does not aim at a future state of affairs—which would thus be distinguishable from the present activity. More than that, the means do not only coincide temporally with their end; rather, the very same activity is both a means and its own end. Ends and means here still exist as categories of human action, but they are bound up in short-circuit of the same material event.

These limiting cases are outside the scope of our theory because they preclude the existence of originary interest. If the means of an action is materially identical with that action's end, then it is not even potentially possible to choose between the means and its end, and thus there can be no value spread between means and ends—nothing can be more (or less) valuable than itself. Our theory of originary interest therefore does not apply in these cases. It only applies to cases in which human action serves to attain ends that are distinguishable from the action itself—*it only applies to cases of labor.*[19]

Turning now to such of labor cases of labor we must first of all point out that the difference between means and ends does not always involve the passing of time. When I fuel my car for a journey, the means and the end are situated at different points in time. But they coincide, for example, when I sing a song for me and for you to hear my voice. Here means and ends are distinguishable—your hearing my voice (the end) is different from my singing (the means)—but they coincide in time. Accordingly, originary interest is here manifest in a value spread between my singing (my means) and your hearing my voice (my end), but it does not spring from the passing of time.

The example shows that originary interest can exist independently of the temporal relationship between ends and means. In particular, it can exist even when an end and the corresponding means coexist at the same point of time—provided only that

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[18]Mises (1998, p. 139) states that the coincidence of means and ends is characteristic of the activities of the genius.

> The activities of these prodigious men cannot be fully subsumed under the praxeological concept of labor. They are not labor because they are for the genius not means, but ends in themselves. . . . His incentive is not the desire to bring about a result, but the act of producing it. The accomplishment gratifies him neither mediately nor immediately.

For a discussion of cases in which ends and means coincide in the same physical object, see also Hazlitt (1972, p. 25, pp. 128f.).

[19]See Mises (1981, pp. 144f.) for the distinction between "immediate satisfaction due to labor" and "indirect labor satisfaction." Later Mises (1998, p. 131; emphasis added) defined labor as follows:

> The employment of the physiological functions and manifestations of human life as a means is called labor. The display of the potentialities of human energy and vital processes which the man whose life they manifest does not use for the attainment of *external ends different from the mere running of these processes* and from the physiological role they play in the biological consummation of his own vital economy, is not labor; it is simply life.

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the use of the means can be distinguished from the attainment of the end, that is, that the means are not exclusively used for their own sake. (Notice that this is a decisive consideration against the "waiting" and time preference theories of interest, both of which relate originary interest to the passing of time.)

We find another, and even more crucial, example to substantiate this contention once we leave the realm of the Crusoe economy and turn to examining human action in the most elementary setting of a market economy, namely, in barter exchanges, such as when Smith exchanges his apple against Jones's tomato. What happens in this case is that Smith seeks to attain his end (ownership of Jones's tomato) by *means* of exchanging his title to the apple against the title to the tomato. And similarly Jones employs his title to the tomato as a means to acquire the title to the apple. Now these uses of means to attain ends are not strictly speaking extended through time. Any contractual agreement is made at a *point* of time, namely, at the point of time when both partners have agreed on the terms of the exchange. By its very nature, choice, in the sense this term is used in economic theory, is made at points of time rather than throughout a process. And because a market exchange involves the decisions of at least two people, the exchange becomes effective only when the last partner has made the decision to cede the title to his property in order to acquire title for another piece of property. The preparations of the exchange, and the actual transfer of the physical property might be more or less time consuming. But the exchange itself is just a matter of will, and becomes effective at a point in time. Thus we have identified another example that shows that the passing of time is only one of the (contingent) conditions under which originary interest determines human action. Originary interest is no more bound up with the passing of time than greenness is bound up with grass.

Let us conclude this section by emphasizing that the value-enhancing feature of spot market exchanges—that is, the presence of originary interest—does not have any visible counterpart. What we see in cases such as the above apple-tomato exchange is that, after the exchange, Smith no longer has his apple, but Jones's tomato, and that Jones no longer has his tomato, but Smith's apple. We cannot *see* however that both of them are now better off, for a tomato is not even physically "more" than an apple, or the other way round. Rather, we know about the mutually beneficial nature of the apple-tomato deal from our knowledge about more general features of human action, in particular, from our knowledge (1) that in every action, man uses means to attain ends and (2) that a value spread between means and ends exists wherever an action is not exclusively performed for its own sake.

Manifestations of Means and Ends in Consecutive Actions

So far we have dealt only with those cases in which the use of means and the attainment of the corresponding ends coincide at one point of time. We now turn to examine those cases in which the use of means and the attainment of the corresponding ends are manifest at different points of time.

Notice that the use of means does not in all cases *precede* the attainment of the ends. It is true that Robinson Crusoe is bound by such a strict temporal order. He must first use his means and attains his ends only after such a successful use. But in a social setting things are different, most notably in the case of credit contracts. Suppose Mayer lends Flint 10 pounds of ice cream for a party, and after a year Flint pays him back 11 pounds of ice cream. Mayer then attains his end (future title to 11 pounds) only after using his means (present title to 10 pounds), but Flint attains his end first and only later uses his means. It follows that originary interest, to the extent that it is manifest in the passing of time at all, concerns value spreads between future ends and present means *and* value spreads between present ends and future means. However, the case of the borrower is less important than the other case, because it is just a variant of the latter. The simple fact is that if there were no capitalists, there

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could be no borrowers. We will therefore focus on the case of capitalists and talk about borrowers only incidentally.

Even when means and ends are manifest at different points of time, ends are in most cases not physically more numerous than the corresponding means, and as a consequence the value productivity of the action has no counterpart in the material realm. Consider the case of Jones, who pursues his ends through several consecutive exchanges. Suppose he exchanges eight hours of his labor against seven loaves of bread from Brown, and then goes on and exchanges these breads against one bottle of wine of Smith's, the ultimate purpose of his market activities. Jones here realizes his ultimate goal, not through one, but through several consecutive exchanges. The first exchange (and all following intermediate exchanges) therefore depends on the ultimate exchange. All intermediate evaluations are made in light of the overarching evaluation of the final good, and all exchange ratios (prices) are formed in light of the exchange ratio (price) in the final transaction. In other words, there is a hierarchical value-relationship between the ultimate goals and the means to attain them: The wine is more important to Jones than the bread loaves, which in turn are more important than his labor.[20] Hence, the Mengerian order of goods is not merely a technological order but also an order of values, the value of a first-order good ranking higher than the value of a second-order good, and so on.

Yet, as in the case of isolated barter, the physical aspect of things gives us no clue to the layer of reality where we find originary interest. Two heterogeneous goods (tomato and apple) stand at the beginning and the end of this process of consecutive actions, and as a consequence one cannot *see* that the acting person controls in any sense more goods at the end of the whole process. An apple is not physically "more" than a tomato; *for Jones* it is more–more valuable, that is to say. Yet we do not infer the higher value of the apple from Jones's observed behavior but from his observed behavior in conjunction with what we know on *a priori* grounds about originary interest.

Things are no different as far as the market behavior of households in a monetary economy is concerned. In economic theory, households are defined by the fiction that human beings exchange labor for money *in order to*, afterward, exchange this money income for other goods x and y. Here too, then, two heterogeneous goods (labor on the one hand, and x and y on the other hand) stand at the beginning and end of a process of several consecutive exchanges. And as a consequence originary interest does not have a visible fruit in the process of household value production in a monetary economy.

It is only in the context of entrepreneurial market behavior that originary interest generates such a visible fruit. For capitalist-entrepreneurs and labor-entrepreneurs exchange money against factors of production, then combine these factors and let them operate in the production of goods and services, which in turn they exchange against money. Only under these circumstances, two *homogeneous* goods stand at the beginning and end of the production process, namely, money expenditures and money receipts. And only here, therefore, is it possible to compare means and ends in identical physical terms so that originary interest obtains a visible counterpart in the world of material things. It can be seen and counted that 1,000 ounces of gold received as payment for products are physically more numerous than 800 ounces of gold paid for the corresponding factors of production. The capitalist-entrepreneur has physically "more"–namely, more money–at the end of his venture than at its beginning. His production is not only (for him) *value*-productive, but also (physically) *money*-productive.

[20]This is at any rate the case at the point of time when Jones initiates the whole process by exchanging his work for the bread loaves. He might later change his mind about these evaluations, in which case the initial exchange of labor for bread might have been, in retrospect, a wrong decision. But this is not our present concern.

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It is sometimes argued that a similar state of affairs obtains when products are physically homogeneous with their factors of production, for example, when 100 pounds of rice are used today to produce 110 pounds of rice in a year from hence. But even if we abstract from the fact that rice *production* requires at least one other factor of production, namely, labor (so that product and means of production are not physically homogeneous even in this case), the rice example does not really touch on the problem of interest.

Consider first that, as in the case of money, 110 future pounds of rice are not by their very nature more *valuable* than 100 present pounds needed to produce them. In other words, from an economic point of view these are heterogeneous goods. Rice production will not be started by virtue of the mere fact that 100 present pounds are liable to generate 110 pounds in the future. Only if people value the latter more highly than the former will they start producing rice, and experience shows that this is not always and everywhere the case.

Second, and more importantly, the relation between 100 present pounds and 110 future pounds of rice is a technological or physical datum. But in the theory of interest we are dealing with human choice and values. There is no technological law according to which 100 ounces of gold invested today will yield 110 ounces in the future. One can invest money in such a way that the expected rate of return will be 10 percent, but it is also possible to invest it in projects that are likely to yield zero percent or -50 percent. What prompts a person to opt for one of these alternatives is not a technological constraint, but his values. And what prevents entrepreneurial competition from eradicating positive rates of return on certain ventures is not any technological constraint, but the values underlying the actions of every single market participant.

Conditions for the Emergence of Money Interest

The visible phenomenon of money interest must not be confused with originary interest. It is true that money interest has prompted the scientific investigation that eventually led to the development of interest theory. But money interest is only a particular *consequence* of human action in the material world, and must be strictly distinguished from its far more pervasive cause. Originary interest is not a manifestation of human action in the world of physical things, but a structural feature of human action itself or, more precisely, of human labor. It constantly generates a great variety of phenomena, only one of which is the use of resources in the context of a market economy, with the purpose of realizing a money surplus. *In these cases*, originary interest prevents the spread between selling proceeds and related cost expenditure from ever being eradicated. But even if there were no money interest, originary interest would still exist in all other cases, in which a resource is used to attain ends different from this resource-use as such. Money interest only comes into being when human action meets with certain other conditions of a more contingent nature. To these we now turn.

Acting man always and everywhere uses means to attain his ends, and he values the ends higher than he values the means. This is so whether the person under consideration acts as an entrepreneur, as the head of a household, or as Robinson Crusoe with or without Friday. But originary interest does not necessarily imply that all ventures in a monetary economy have a positive interest rate. Sometimes acting man does not strive to achieve a physical (money) surplus, but consciously and willingly accepts that his venture will lose money. For example, the philanthropist who invests 100 ounces of gold in a hospital that sells its services for a mere 90 ounces of gold still values the end (medical services delivered for a sum of 90 ounces) more than he values his investment. His originary interest is positive, even though the money interest of his venture is negative.

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It is true that one would not usually use the word "interest" to designate a negative interest at all; there is also a good reason why we speak in the above case of a philanthropist rather than of an entrepreneur. The philanthropist does not even attempt to make money out of his investment, while the entrepreneur distinguishes himself precisely through this attempt. But this terminology is irrelevant for our present task because we look at things from the general standpoint of the relationship between ends and means. We have to examine if and under which conditions originary interest produces, in the world of material things, differences between selling proceeds and the related cost expenditure. And here we must notice that there is a continuum of interest. Originary interest produces "negative" money interest in some cases and "positive" money interest in other cases.

Some hospitals are operated on a philanthropic basis, whereas others are run on a commercial basis. The statement of this fact does not reduce the importance of the latter case—economists were certainly justified in concentrating on the case of positive money interest. It is, after all, not difficult to explain how people can willingly invest money into projects that yield less money than the initial investment. Everybody can do this, and most people would in fact love to specialize exclusively in this kind of expenditure. But why do *some* projects yield a money surplus that cannot be entirely eradicated through the competition of other entrepreneurs? This is the crucial question. And the answer is, in a word, that *in these cases* all resources that could possibly be invested in competing ventures are reserved for projects that the owners of these resources consider to be more important.

Consider the case of the production of meals. Here we usually encounter three types of producers: (1) entrepreneurs operating through firms called "restaurants" etc., (2) nonprofit associations, and (3) private households.

The case of the restaurant owner is straightforward. As every other entrepreneur, he proceeds by first estimating the selling receipts for his future products, and in light of these expectations he will bid for factors of production. The sum total of his bids will always be less than the sum total of his expected selling receipts, for the very fact that he strives to realize a spread between selling proceeds and outlays for the corresponding factors of production. He would in fact not even start his venture if he did not expect to realize this spread. In other words, if our restaurant owner realizes a spread between selling proceeds and related expenditure on factors of production, it is not because some anonymous market forces somehow bring this about. If he realizes this spread, it is because he himself, from the very outset, has paid only such factor prices that eventually resulted in the spread (because he had correctly anticipated the proceeds from selling the product).

Now, this spread might contain a profit component and an interest component. Other market participants can eradicate the former by entering the *same* business, thus bidding up the prices of the required factors of production, and bidding down the prices of the product. This competition can come for example from the side of a man who sells his shoe factory and establishes a restaurant, thus bidding up the prices of foodstuff and bidding down the prices of restaurant meals. Yet the characteristic feature of such entrepreneurial competition is that it eliminates profit, but not interest. With the conceivable exception of temporary cutthroat competition, entrepreneurial competition does not result in a complete elimination of the spread between buying and selling prices. The very point of investing resources in an entrepreneurial venture is to achieve a money return on the investment. Other entrepreneurs will therefore shift their resources into a competing restaurant only if (1) they expect a positive money return on investment and if (2) no alternative investment opportunity seems to yield a higher money return. They will not eradicate the return on investment earned by our restaurant owner because they themselves will in their bidding for factors of production strive to provide for such a return. It is true that different

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entrepreneurs have different originary interests, so that each of them will strive at a slightly different minimal spread between selling proceeds and cost expenditure. But although these differences can be smoothed out through arbitrage, the spread itself can never be completely eradicated through entrepreneurial competition because each entrepreneur seeks to provide for a positive spread.[21]

The spread between buying prices and selling prices of our restaurant owner could however be eliminated in its entirety through the competition of *other* types of business that use the same factors of production, in particular, labor. These firms might for example bid up the wage rates of cooks and waiters to such an extent that our restaurant owner could no longer realize a money return on his investment.

His return on investment could also be eradicated through the competition of meal producers who from the outset do not seek to realize a money return. If consumers switch from patronizing restaurants to home cooking, then the prices of foodstuff will increase and the prices of restaurant meals will drop. As all other competitors, these people withdraw resources from uses they believe to be *less* important, and invest them in the production of meals. Thus they could for example move from a full-time to a part-time job, or spend less time with their children, in order to work longer hours in their vegetable garden and in their kitchen. *If* they shift enough resources into the production of meals, the money interest earned by our restaurant owner will be eliminated. By contrast, *if* they do not shift enough resources into the production of meals, then it will be impossible to completely eradicate the price spreads of our commercial meal producer. But why should they ever stop short of putting more resources into home cooking, rather than occasionally eating out at a restaurant? The answer is, of course, that they might think there are more important employments for their resources. In this case, a further elimination of the spread between the proceeds from selling meals and the expenditure on the related factors of production of meals would entail personal disadvantages for the arbitrager. The price spread that subsists because its elimination would be disadvantageous for every single market participant is "positive interest" or simply: interest.

Thus we have given a more specific characterization of the conditions under which originary interest causes the phenomenon of money interest in the realm of material things. We ended up with the familiar conclusion that *some* ventures do not earn interest because other entrepreneurs can afford to bid up the prices of the needed factors, and also because people prefer to make the product by themselves rather than pay someone for doing it at their place. In short, only those projects earn interest which do not prevent more important uses of the resources they consume.

This leads us to the question whether market interest could conceivably be eliminated in *all* ventures. The answer would be in the affirmative if every single market

[21]In light of this, it is not difficult to see that the role of credit markets is a derived one. In granting a credit, a creditor employs a means to attain an end that for him is more valuable than the means. Creditors usually require the payment of money interest because otherwise they could just as well keep their money and not expose themselves to the risks of having other people control their property. It is not difficult to understand this, and neither is it difficult to see that this does not have anything to do with the time preference of creditors, but with the originary value spread between ends and means that gives rise to all forms of money interest. The interest payment is what makes the end of this transaction (the principal and the interest) more valuable for him than the means (the principal) he employs. Hence, value-productivity here takes on the typical form of entrepreneurial activities on the market: it yields a visible physical surplus, the creditor having more money at the end of the credit than at the beginning. The question is merely why the demand for interest payments can be satisfied. Why do creditors obtain these payments? The answer is that these interest payments derive from the price spread that firms realize as part and parcel of their market activities; entrepreneurs can pay interest to their creditors because, from the very outset, they exclusively engage in money-productive ventures.

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participant cherished the use of his resources *per se*, to the point that all other effects emanating from this resource use would have no bearing on his decision. Every single action would *ultimately* be performed for its own sake and the use of all his other resources too would *ultimately* be invested for the sake of investing them this way. Under this scenario, market competition would eradicate interest in all ventures, because *no* market participant would take care to limit his expenditure on factors of production to provide for the realization of money interest.

Now there is no need to emphasize in any length that this condition is not given, and has never been given, in human life. It is even difficult to imagine such a state of affairs, be it only for the relatively simple case of a Crusoe economy. Our Crusoe would have to effortlessly shift between the various occupations needed to sustain his living, and at each point in time he would have to find that his present activity is just what he likes to do more than anything else, quite apart from the fact that it is also necessary to keep him alive. Surely this could not possibly happen short of the intervention of divine grace. But even more so would the help of the Most High be required to insure that a great number of individuals engaged in division of labor do what is necessary to keep cooperative production going, merely for the sake of doing what they do. Not only interest, nay, prices in general would disappear in this world, in which the fire of divine inspiration makes exchange and monetary calculation superfluous.

It is true that acting man on a few occasions does things only for their own sake. But in the great majority of all cases the use of a resource in any project P is meant to *also* achieve a result X different from P. In these cases, P does not *per se* occupy the highest rank on the value scale of our agent—P is not ultimately performed for its own sake—but occupies this rank only in conjunction with its result X. And this very fact implies a trade-off between P and X. Acting man will at some point—for example, when he discovers that X can be achieved by a sufficiently low resource input in an alternative project A—choose to pursue A rather than P, which means nothing else than that he chooses A because it earns him interest.

In short, the conditions for the emergence of money interest are as universal as originary interest itself. As soon as man not merely acts, but labors, his actions are determined by originary interest and are therefore likely to bring about money interest, in certain types of production, within the division of labor.

Money interest is that component of observable spreads between selling receipts and cost expenditure that cannot be eradicated without entailing personal disadvantages for those who undertake this eradication. It comes into being as a consequence of the trade-off implied in the relative values of definite (marginal) quantities of means and ends in competing investment projects. And it springs *only* from the values of means and ends in competing projects, not from those marginal quantities *per se*, or from any other physical constraint. We could say in modification of Rothbard's (1993, p. 326) dictum that it is relative values, and relative values alone, here in the form of originary interest, that determine the market result; the explanation does not lie in some sort of "mutually determining process." And let us also emphasize again that relative values, as manifested in the values of means and ends in competing projects, account for the entire spectrum of conceivable money investments. They explain the "positive money interest" realized in entrepreneurial ventures as well as the "negative money interest" resulting from philanthropic undertakings. And they also explain, in broad outline at least, why and when positive money interest emerges and disappears.

Understanding Price Spreads in the Real World

Our analysis confirms the common-sense notion that neither interest nor any particular interest rate is somehow inherent in any given venture. Both can vary, and both can vanish altogether as a consequence of changes in the perceived relative values of

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ends and means in alternative investment projects.[22] A 10-percent interest rate obtained by making steel product X, for example, does not mean that 110 ounces of gold obtained through the future sale of X are *inherently* more valuable than the 100 ounces paid now for the corresponding factors of production. And neither does it mean that all current investments yield in fact a 10-percent return. What it means is that there are here and now no men ready to invest 100 ounces into the production of X unless the yield is at least 110 ounces. The combined originary interests of the market participant do not allow for any arbitrage that would eradicate the minimum return of 10 percent on the production of X.

The interpretation of concrete real-world phenomena is, of course, more complicated than this example suggests. For here we knew by hypothesis that the production of X yielded a return of 10 percent and that the entire return was interest. But in any real-world identification of an interest component in the observed return on an observed investment project it would not be sufficient to just look at the observed selling proceeds and to contrast them with the related cost expenditure. These data do not per se reveal which part of the price spread (if any) is interest, and which (if any) is profit. Rather, adequate understanding of any real-world case requires that one take into account the relative values of end and means of all alternative projects as they present themselves to each individual market participant. It goes without saying that this is a very tricky task, but it is the only way to understand *why*, in the case of X, no market participant is willing to invest his money for less.[23]

We here encounter the limits of the praxeological or theoretical analysis of interest. Theory provides us with the *a priori* categories we need for classifying otherwise disconnected bits of reality. But the identification of the category of interest in a concrete phenomenon requires additional information and guesswork that theory cannot possibly provide. In praxeology, we are primarily concerned with the implications of human action; that is, we start from concrete human choices as ultimate matters of fact (ultimate givens) and study the consequences that follow from these facts. In the present case, the (assumed) relevant fact is that nobody *does* invest his money into the production of X for less than 10 percent. But why did nobody do this? There is no praxeological law that would rule out such an event; nothing in the nature of human action prevents such decisions. So what were the causes that prompted these decisions anyway, in the present case? Praxeology alone cannot answer this question; to fully explain the causes of any given human choice one needs to resort to a psychological—or, as Mises would say—to a thymological understanding of the case.[24]

A few (non*aprioristic*) generalizations are nevertheless possible on the basis of our thymological knowledge about human beings. We understand for example why

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[22]A uniform money interest rate would emerge in the market only in the hypothetical case that the market participants do not use their resources, to any extent, for the sake of using them in the way they use them.

[23]For a detailed discussion of the problems involved, see Hülsmann (2000, pp. 18-26).

[24]See Mises (1985, pp. 264ff., 312ff.). It is only because we know about originary interest in the first place that we can apply this theoretical knowledge to identify the repercussions of originary interest in the material world. If we limited our study of human action only to the surface of visible things, we would find that there are more or less frequent spreads between selling receipts and cost expenditure. But we could not tell anything about the heterogeneous cause of these spreads. It is only because we know from praxeological analysis that there is a value spread between means and ends, that we understand one possible cause of the spread between selling receipts and cost expenditure. Not all observed price spreads are therefore accidental—more precisely, it is not necessarily the case that observed price spreads result *exclusively* from accidental factors.

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people invest their time and money in the production of steel products only against compensation in the form of interest. The reason is that hardly anyone–at any rate, not enough people–appreciate the steel-making business for its own sake. A more or less great number of other cases are similar. Acting man typically invests in the production of transistor radios, tires, carpets, etc. only if he can expect to gain money interest, because he would not pursue these projects for their own sake. By contrast, people do invest time and money in certain other production processes without requiring compensation through interest, if they cherish these productions for their own sake. This is, for example, the case when resources are invested in the embellishment of one's garden or one's house, or in a private tennis club, or in a private theater. Investments in these projects are compensated through interest payments only to the extent that it is necessary to attract "outside" investors, that is, persons who have no personal stake in the project.

Interest Rates

Interest Ratios and Interest Rates

So far we have seen what originary interest is (the value spread between means and ends), that it exists in all those cases of human action in which means and ends are materially distinguishable, and that, through the actions of capitalistic firms, it generates under certain conditions the phenomenon of money interest. It is only in the case of money interest that originary interest has a visible counterpart in the material realm–the ends here are physically more numerous than the corresponding means–and it is only in this case that one can calculate a money interest rate, that is, a percentage ratio between the proceeds from selling a product and the expenditure on the corresponding factors of production.

Now we have to deal with the question how human choice determines *interest rates* in a given physical context, which in turn is determined by certain purely physical laws.[25] It is expedient to approach this problem by first discussing the more fundamental problem of *interest ratio* determination in nonmonetary economies. Only in the case of money interest is the ratio between means and ends a percentage or rate, whereas in all other cases it is just a ratio between heterogeneous means and ends.

Both interest ratios and interest rates are ratios between quantities that result from human choice in a world determined by the laws of production. These laws involve certain quantitative relationships between products and factors of production, and acting man picks those combinations of physical input and physical output that he seeks to realize.

We will therefore first take a look at the quantitative relationships between means and ends that result from the laws of production, and which exist, as laws of potential reality, independent of human imagination and human choice. Then we will argue that human choice "demonstrates" the interest ratios necessary for the realization of any production alternative, and we will also briefly examine how interest ratios are modified under the impact of market exchange. Third, and finally, we will study how originary interest affects the choice between different production projects in monetary economies; in particular, we will examine how these choices affect the relationship between money proceeds from selling a product and money expenditure on the

[25]Notice that we are not here dealing with the *gross* market rate of interest, but only with one of its components, namely, the so-called *pure* rate of interest. For a discussion of the other two components of the gross rate–the entrepreneurial component and the price premium–see Mises (1998, pp. 538-45).

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corresponding factors of production–in other words, how they will affect the interest rate.

Laws of Production: Means of Sustenance, Savings, and Physical Productivity

Human choice is no free-floating, purely spiritual event, detached from all earthly things. It is always a choice about how to use the things that the choosing person controls. In other words, it is always a choice about how to use one's property.[26] Whether we choose to ponder questions of interest theory, to take a walk in the park, or to buy bread–we always make a decision about how to use various parts of our property: brains, body, money, etc.

From the point of view of production, means of sustenance or consumers' goods are particularly important parts of our property. The fundamental and simple fact is that there can be no human action without the consumption of means of sustenance. In a narrow sense this refers to consumption of food to sustain the organic functioning of our limbs and brains. In a somewhat wider sense it refers to the consumption of clothing, housing, and many other forms of protection for our bodies. As consumption of these goods must precede human action, they have to be available before action becomes possible. This is most obviously so in the case of the newborn, who has virtually no control of his body, and needs parents or other people to provide him with food and shelter. But even in the case of an adult, action is possible only if the person can live on previously accumulated means of sustenance that are not yet exhausted ("savings"), for example, on the food in his stomach that gives him the energy to engage in his present activities. In short, any single instance of human action, not just long-term production processes, is possible only through savings.

The quantity of one's saved means of sustenance determines the extent to which it is possible to engage in long-term production processes.[27] This possibility is important because longer production processes–by the very fact that they are longer–can be physically more productive than production processes of a shorter duration. The longer one can live on previously accumulated means of sustenance the more natural forces one can turn into capital goods, which make the production of further means of sustenance ever more abundant. Rather than focusing one's energies only on the proximate factors determining the abundance of a product, one can start influencing the more remote factors. In a great passage from his *Principles*, Carl Menger (1976, pp. 73f.; 1871, pp. 26ff.) explained the relationship between production time and physical productivity:

> In its most primitive form, a collecting economy is confined to gathering those goods of lowest order that happen to be offered by nature. Since economizing individuals exert no influence on the production of these goods, their origin is independent of the wishes and needs of men, and hence, so far as they are concerned, accidental. But if men abandon this most primitive form of economy,

[26]This has been emphasized by Böhm-Bawerk (1881) and especially by Rothbard (1993). See also Hülsmann (1997) and Gaël Campan (1999).

[27]It is true that the expression "means of sustenance" covers a large range of heterogeneous goods. But all means of sustenance make human action possible, and all of them are scarce since they all deliver services that are limited in comparison to human needs. Because of the physical heterogeneity of one's means of sustenance, each person's savings merely have a specific time structure, that is, one's means of sustenance deliver their services at distinct moments in time. For example, the half-digested food in a person's stomach delivers services for a couple of hours or days, whereas the cheese he has produced and the apples and other fruits that he picked can deliver services within a time-span of several months before they perish. In any case, however, since all of these services are limited at *each* point of time and since all of them perish at *some* point of time, they have to be economized.

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> investigate the ways in which things may be combined in a causal process for the production of consumption goods, take possession of things capable of being so combined, and treat them as goods of higher order, they will obtain consumption goods that are as truly the results of natural processes as the consumption goods of a primitive collecting economy, but the available quantities of these goods will no longer be independent of the wishes and needs of men. Instead, the quantities of consumption goods will be determined by a process that is in the power of men and is regulated by human purposes within the limits set by natural law. . . . Increasing understanding of the causal connections between things and human welfare, and increasing control of the less proximate conditions responsible for human welfare, have led mankind, therefore, from a stage of barbarism and the deepest misery to its present stage of civilization and well-being. (Menger 1976, pp. 73-74; 1871, pp. 26ff.)

Hence, the sheer quantity of one's saved means of sustenance is an important element of the time structure and physical productivity of one's property. The larger this quantity the longer the possible production processes and thus the higher the potential physical productivity of one's property.

This being said, let us emphasize that there is no mechanism determining the use of saved means of sustenance. A person who owns and consumes many means of sustenance does not necessarily pursue long-term projects to increase his physical productivity. Suppose that Jones owns a barrel of wine and 10 loaves of bread. He could just have a good time without doing any work whatsoever, thus consuming his property "consumptively" and afterward leading a hand-to-mouth existence. Things would be different if he decided to use the energy he derives from his meals to make an axe, a net, or other higher-order goods necessary for an increase in physical productivity. In this case he consumes his foodstuff "productively," that is, his consumption is also instrumental in bringing about a bigger supply of his means of sustenance in the future. In short, while the quantity and physical characteristics of one's means of sustenance determine the physical limits of one's productive ventures, or one's production possibility frontier, human choice alone determines whether and to what extent a person engages in some sort of production at all (see Strigl 2000, pp. 24-35).

Demonstrated Interest Ratios in Crusoe Economies

Each choice alternative involves a particular combination of ends and means. Thus each choice alternative also goes hand in hand with a particular ratio of ends and means. By making his decision in favor of one of these alternatives acting man "demonstrates" the interest ratio necessary to attract him into this venture. We will call this ratio the "personal interest ratio" of this man.

Let us however emphasize again that an interest ratio can only be demonstrated to the extent that means and ends do not coincide in the same physical object. Only to the extent that man pursues some goal different from his action itself, is this action *laborious*, and thus originary interest comes into play. If there is complete coincidence of the ends and means of an action, there cannot even potentially be a choice between ends and means, and thus this action neither contains originary interest nor does it bring about an interest ratio in the realm of physical things. In the extreme opposite case, ends and means are manifested in completely separate objects. Here originary interest comes into play and there is also an interest ratio. Many real-world cases feature some intermediate combination of these two cases. For example, taking a bath can be pleasant quite apart from the fact that it makes us clean, playing theater can be fun quite apart from entertaining an audience, hunting can be satisfying quite apart from providing us with food.

Man labors only if the expected ratio between input and output is high enough for him. When he chooses means and ends he thereby demonstrates the interest ratio

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necessary to attract him into an activity that he would not otherwise have chosen. The higher the output of an action in purely quantitative terms, the higher of course the ratio between input and output (in all cases in which marginal physical productivity is positive). Acting man can to some extent steer this ratio through his savings-investment decisions. Here the above-mentioned relationship between savings, length of production, and physical productivity comes into play. But this physical relationship only has indirect bearing on the determination of interest ratios. No level of output (and, accordingly, no ratio between input and output) is *per se* high enough to prompt a human being to perform the action that leads to this output.[28] Rather, it is human choice alone that defines how much physical output of an action A is necessary to compensate the acting person for being deprived of the benefits of an alternative action B that is *per se* more desirable than A. In other words, the acting person demonstrates through his actual choice the height of the interest ratio necessary to attract him to this action. The more he prefers pursuing projects for their own sake, the higher is the output (and thus the interest ratio) of other projects necessary to incite him to abandon his favorite activity. The less he prefers doing things for their own sake, the smaller is the output (and the interest ratio) of other projects necessary to incite him to abandon his favorite activity.

In the context of time-consuming production processes, the preference for activities one enjoys doing for their own sake is a preference for partial gratification in the present as compared to a gratification that lies only in the future. The mere fact that a man engages in some long-term project does not presuppose a low interest ratio. It might just be the case that he very much prefers this project for its own sake, in which case the interest ratios necessary to attract him into other projects would be relatively high too. For analogous reasons, short-term orientation in production does not necessarily go in hand with high interest ratios. We might say, however, that consumption without ensuing productive effort reflects *higher* interest ratios than consumption to sustain productive efforts. When Jones eats and drinks for the sake of eating and drinking, he demonstrates, through his very action, that his consumption is (entirely) focused on itself rather than (also) oriented toward other goals. By contrast, when he eats and drinks in order to work he demonstrates that his consumption is (also) oriented toward other goals rather than (only) toward partying.

Demonstrated Interest Ratios in Barter Economies

Human choice thus determines how many and which kinds of capital goods acting man tries to produce, and it thereby determines the entire structure of production. Even though we have so far only considered the case of a Crusoe economy, cursory reflection shows that things are not fundamentally different in a barter setting. The main difference is that in the latter case production is mediated through exchange. This modifies the determination of interest ratios in two important respects. First, the relationships between means and ends are no longer exclusively determined by the physical laws of production, but also by the barter exchange ratios, which spring from choice. Second, these exchange ratios are subject to the law of decreasing marginal value. It follows, in particular, that higher quantities of product will not lead to a proportional increase of selling proceeds, but to an underproportional increase.

But we can discuss the necessary details in the context that interests us most: the case of a monetary economy.

[28]We here find a determination of human choice, and thus of the interest ratio, in the form of case probability. See Mises (1998, pp. 110ff.).

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Demonstrated Interest Rates

Whereas the interest ratios that we find in Crusoe and barter economies are heterogeneous magnitudes, interest rates have a common unit: they are percentages. All investment projects, whether they are already implemented or merely considered are therefore comparable. A monetary economy is no mere juxtaposition of heterogeneous plans and actions. It is a true division of labor, integrated through monetary calculation. But even in the great social fabric of the capitalist economy, it is ultimately individuals who determine interest rates and the structure of production. Individual choice demonstrates the interest rate necessary to attract the individual to the pursuit of a given project. And by the same token individuals select the firms and projects that make it from planning to implementation. In what follows, we will give a somewhat schematic outline of how individual choice determines the money pricing process, and thus interest rates.

To make the illustration of this process as simple or possible, we will assume that the market participants do not appreciate their productive efforts *per se*, but only the marketable results of these efforts. In other words, we shall assume that the praxeological difference between ends and means is fully reflected in a physical separateness of ends and means. This is also how Murray Rothbard (1993, chap. 6) proceeded in his brilliant explanation of the interest rate, and our argument will therefore parallel his exposition to some extent. In particular, we will show how the pricing process combines and integrates the personal interest rates of all the individual members of society.

One fundamental shortcoming of most analyses of the pricing process is that they focus exclusively on *money expenditure*. Under the nefarious influence of Lord Keynes and his disciples, the great majority of economists have neglected to study the impact of *money acquisition*. But the fact is that market participants determine money prices not only by using money that they already own, but also by acquiring money that they do not yet own. Accordingly, we have to take a look at how using *and* acquiring money reflects originary interest and determines interest rates.

A market participant can *use* his money fundamentally in five ways. He can spend it on factors of production–on labor, land, and capital goods (Case 1), spend it on consumers' goods (Case 2), keep it in his cash balance (Case 3), destroy the money (Case 4), or give it to someone else (Case 5). All other uses are variants of one of these five. For example, keeping one's money in a bank deposit is a variant of Case 3, and buying a stock paper is a variant of Case 2. Market participants *acquire* money most notably by renting out their labor services and by renting or selling other elements of their property. For a proper examination of the impact of human behavior on the interest rate and the time structure of production, we therefore have to analyze the consequences of each combination of money use *and* participation in the division of labor. Let us briefly characterize these consequences in each of the five cases.

Case 1

The decision to spend a sum of money on a producers' good makes the price of this good higher than it otherwise would have been. This decision does not however affect the available supplies of commodities–in particular, the future supply of consumers' goods–but merely increases the price of one producers' good.[29] It follows that the spread between the future prices of consumers' goods and the present prices of producers' goods decreases at the margin–in other words, the interest rate decreases below the level it would otherwise have reached. The individual's decision

[29]The reason is, in short, that if our entrepreneur had not bought this producers' good, it would have been sold–even though at a lower price–to another entrepreneur, who in turn would have used it in production.

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to save and invest his money is therefore, as one might expect, reflected in a decrease of the interest rate below the level it would otherwise have reached.

Case 2

Spending a sum of money on a consumers' good makes the price of this good higher than it otherwise would have been, and as a consequence of this patronage the production of this good has been more worthwhile than otherwise.

For the determination of *current* interest rates, however, this backward looking observation is irrelevant. Present expenditure on consumers' goods affects present interest rates only indirectly, namely, to the extent that it provides a basis for estimating future expenditure on consumers' goods. It has a direct impact only on entrepreneurial profits and losses related to *past* investments. If present expenditure on a consumers' good is higher than had been anticipated in the past, its producers will make a profit (or more profit than they expected); if it is lower than anticipated, the producers will incur a loss, or in any case have a smaller profit than they expected.

What determines current interest rates is the way the consumers' good is used. If it were used consumptively–that is, if it is not used to sustain the decision-maker in a process of production for the market–then current wage rates would be higher, and current production lower than otherwise would have been the case. As a consequence, the future output of consumers' goods and the corresponding selling proceeds will also be lower than otherwise. Now we must stress the fact that the future decrease of selling proceeds will be *overproportional* as compared to the present decrease of cost expenditure on wages. This is because capitalist entrepreneurs make only investments that are likely to yield money interest. It follows that any decrease of production involves lower cost expenditure in the present and *even lower* selling proceeds in the future.

A purely consumptive use of the purchased consumers' good will therefore make the spread between selling proceeds and cost expenditure higher than it otherwise would have been. In other words, the interest rate will increase above the level it would otherwise have reached. This is exactly what one would intuitively expect to follow from a purely consumptive use of consumers' goods. For what such a purely consumptive use demonstrates is that the end to be attained through labor (the wage) is not important enough to determine the person in question to work. The interest rate (money wage divided by expenditure on means of sustenance) is not high enough to incite this laborer-entrepreneurer to sell his services on the market. And this high personal interest rate increases, as we have seen, the market interest rates of all entrepreneurial ventures.

By contrast, in case the consumers' good is used productively–to sustain the decision-maker in producing for the market–current wage expenditure will be higher, current production higher, and future output higher too. And thus, for reasons analogous to the ones we mentioned above, future selling proceeds will increase even more than present factor expenditure; thus the interest rate decreases and we get the expected result. Again, it is the personal interest rate of each market participant that determines whether the man who spends the sum of money will proceed to produce for the market, and to which extent he does this. The minimum wage rate for which he offers his services will depend on the available alternatives and, in particular, on the extent to which he cherishes some of them *per se*.

Case 3

The decision *not* to spend one's money, but to keep it in the cash balance (hoarding), does not affect any price in particular. It decreases the overall quantity of money offered on the market, so that the existing supplies of the various goods and services are now sold at lower prices. In other words, the purchasing power of those quantities of money that are offered on the market is now higher than otherwise. But since

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this does not affect any good in particular, hoarding does not affect the price structure in any particular direction. It just gives a greater weight to the expenditure of other money units.

There will also be a certain redistribution of income within society as a whole. But this affects interest rates only accidentally, that is, not systematically in the direction of either higher or lower interest rates, so that we can neglect it here.[30]

Let us stress however, an important implication of the decision to hoard one's money. The decision means that the person in question can afford to live on for a while without purchasing consumers' goods from the market. And this fact brings us immediately back to the question of what he does with his time–does he use it consumptively or productively? Depending on his decision, that is, depending on his personal interest rate, he will bring about the consequences we have already traced out in our analysis of Case 2. If he sets out to produce more goods, the interest rate will decrease; if he does not produce, the interest rate will increase.

Case 4

If the owner of a quantity of money decides, for whatever reason, to destroy this entire quantity or a part thereof, the overall quantity of money in the economy will decrease accordingly. It follows that each of the other units of money will have an increased purchasing power, so that the expenditures of the other market participants will have a greater weight than would otherwise have been the case. This in turn implies that we are back at exactly the same constellation as in Case 3. The only difference between the two cases is that the price level in Case 3 is higher than the one in the present case. But the reduced price level has obviously no impact on interest *rates* whatsoever, so that we can neglect it here.

It follows that the same considerations we brought to bear on Case 3 also bear on this case. Again, the interest rate is determined by the degree to which our decision-maker takes action to provide for future consumption, that is, by his personal interest rate.

Case 5

The decision to give one's money to someone else is tantamount to a (voluntary) redistribution of income within society. The new owner is likely to spend the money on other goods and services than the ones the original owner would have bought. Different productions now turn out to be profitable. But this has no systematic impact on current interest rates. Rather, as we have pointed out above, current rates depend entirely on how the money is used. In the present case, we have to observe that the donor of the money can apparently afford to live on without purchasing additional consumers' goods, and that the beneficiary is now in a position to use the additional money in one of the ways we have analyzed above.

Thus, we are back again at our analysis of Case 3, which applies to both the donor and the recipient of the money. The interest rate is determined by the degree to which our two decision-makers take action to provide for future consumption.

Conclusion

Originary interest does not spring from the passing of time, but from the value relationship between means and ends. The means of action are inherently less valuable than the ends they serve. Therefore there is a value spread between means and ends–originary interest–in all human actions in which means and ends can be distinguished.

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[30]For a discussion of the impact of redistribution on interest rates see Mises (1998, pp. 545-47).

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Originary interest in this sense is an *a priori* feature of human action. It must be distinguished from the phenomena it generates in the realm of material things—in particular, money interest and the interest rate—which lead a somewhat more contingent existence. Acting man does not have any *a priori* inclination to pursue production processes that yield a positive monetary return on investment. And even in those cases in which a man acts with this purpose in mind he does not necessarily achieve his goal. He succeeds only when the combined effect of the originary interests of all other market participants prevents the yield of his project from being arbitraged away. In these cases, his originary interest causes a positive spread between the money proceeds from selling his product and the money expenditure on the related factors of production. This spread is money interest. It cannot be eradicated through competition without entailing disadvantages for the very entrepreneurs doing the eradication—in distinct contrast to entrepreneurial profit, the eradication of which is beneficial to the arbitrager.

Originary interest determines how each market participant chooses between production alternatives of different length and physical productivity. The combined originary interests of all market participants determine the time structure of production of the entire economy, as well as interest rates.

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The Rebirth of Austrian Economics— In Light of Austrian Economics

Joseph T. Salerno

Since human beings are not disembodied minds who instantly and costlessly absorb new knowledge, every scientific movement, if it is to flourish and advance, requires an institutional framework. By the institutional framework of a science, I mean a complementary set of means aimed at developing its ideas and theories, disseminating them among its active researchers and teachers, and inculcating them into its students and sympathetic public intellectuals. The institutions that constitute this framework include research institutes and libraries, graduate schools, regular conferences and colloquia, book series, and scholarly journals. Of course, the construction of such an institutional framework requires the power of disposal over real resources, that is property, and the will to employ such property exclusively and without deviation for the advancement of the science.[1] The travesties of National Socialist "biology," Soviet Socialist "physics" and the Keynesian "New Economics" should teach us that the property base that composes a science's institutional framework must be entirely private and independent of the State.

There is an exception to this key sociological principle of scientific progress. A creative genius such as Carl Menger, Ludwig von Mises, or Murray Rothbard working in isolation and outside a well-developed institutional framework may significantly

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[1]The term "property" is here used in Menger's sense of a complex of complementary economic goods committed to a unitary scale of ends:

> The entire sum of goods at an economizing individual's command for the satisfaction of his needs, we call his *property*. His property is not, however, an arbitrarily combined quantity of goods, but a direct reflection of his needs, an integrated whole, no essential part of which can be diminished or increased without affecting realization of the end it serves. (Menger 1981, p. 76)

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advance the science supported mainly by his own resources. But in the absence of an institutional nexus of research institutes, academic programs and scholarly journals congenial to his work, the fruits of his genius will attract few active researchers and after his death they will quickly wither on the vine and the science will eventually retrogress. Now it may happen that a second creative genius appears on the scene as a student or protégé of the progenitor of new ideas and is able to develop the science further along the lines laid out by the master. Austrian economics has certainly benefited from such serendipitous intellectual relationships as those between Menger and Böhm-Bawerk, Böhm-Bawerk and Mises, and Mises and Rothbard. But serendipity cannot be depended upon to sustain the advancement of a science in the long run. Moreover, a science develops much more surely and rapidly when its problems are approached from different angles by a number of unique and individualized minds that are in active communication with one another. Finally, a progressing science cannot remain the domain of a solitary mind generation after generation because man, whether or not he is a mental giant among his species, is not infallible in his quest for truth. His ideas and theorems require the relentless and disinterested critical evaluation that can only be provided by other minds. As Mises (1998, p. 68) stated: "Man can never become omniscient. He can never be absolutely certain that his inquiries were not misled and that what he considers as certain truth is not error. All that man can do is submit all his theories again and again to the most critical examination."

Having argued that an institutional framework based on property is indispensable for sustained progress in the quest for scientific truth, I now address the contrary thesis maintained by the brilliant founder of Austrian economics, Carl Menger.

Menger's Fateful Error

Despite his pioneering brilliance in economic theory, Menger had a flawed conception of the sociology of the scientific enterprise. He denied in word and deed the proposition that rationally designed institutions constructed out of scarce, tangible means were required to aggressively combat erroneous ideas and promote scientific truth in economics. His most eminent immediate follower, Böhm-Bawerk, suffered from the same misconception. This misconception is summed up in the following statement discovered by Friedrich Hayek among Menger's unpublished papers after his death: "There is only one sure method for the final victory of a scientific idea, namely, by letting every contrary proposition run a free and full course" (quoted in Mises 1978, p. 38). This dictum was translated elsewhere in a slightly different form: "There is no better means to disclose the absurdity of a mode of reasoning than to let it pursue its full course to the end" (quoted in Mises 1984, p. 36).

Unfortunately and greatly to the detriment of Austrian economics, both Menger and Böhm-Bawerk rigidly adhered to this dictum in practice. Menger never attempted to engage himself in academic politics in order to obtain appointments for his followers. Neither did Böhm-Bawerk ever exert his potent influence as Minister of Finance and later as a prominent former statesman in an academic position to promote the academic appointment of economists sympathetic to his views. Menger occasionally, although unsuccessfully, tried to block the academic appointments of those egregiously unacquainted with economics, but Böhm-Bawerk refrained from even this course of action. In fact, the classical-liberal Böhm-Bawerk even promoted the candidacy of the rabid anti-Austrian and proto-National Socialist Othmar Spann for an academic position at a technical institute (Mises 1978, p. 37). Böhm-Bawerk also persistently trumpeted the brilliance of the young Joseph Schumpeter in his letters to other prominent economists and assisted him in obtaining a prestigious position as one of the youngest professors in the Austro-Hungarian empire, despite the fact that

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Böhm-Bawerk profoundly disagreed with Schumpeter's view that economics was about unmotivated quantities of things rather than motivated human actions and that mathematical equilibrium models formed the core of economic science (Salerno 1999, pp. 41–42). The result of Menger and Böhm-Bawerk's self-imposed dictate against intervening to construct an institutional environment more conducive to the dissemination and development of their economic doctrines was devastating for the cause of economic science. The economics professoriat at Austro-Hungarian universities became filled almost exclusively with the disciples of German historicism who were bitterly opposed to theoretical economics in general and to Austrian economics in particular and connived against granting positions to the followers of Menger (Mises 1978, p. 38).

Menger and Böhm-Bawerk, indeed, went to almost absurd lengths in applying their principle of allowing scientific truth to emerge spontaneously and refusing to purposively shape and deploy the institutional means at their disposal to advance their own views on economics. For example, Mises lamented that in Böhm-Bawerk's famous seminar, which he attended from 1904 to 1913, Böhm-Bawerk deliberately relinquished an important part of his responsibility as seminar leader by granting every participant an "extraordinary freedom to speak." Predictably, this freedom was occasionally abused by inconsiderate speakers and most egregiously by the abysmal thinker and fanatical Marxist, Otto Neurath (Mises 1978, pp. 40–41). Menger was not even concerned that his writings remain in print. Thus he refused to grant permission for a second edition of his path-breaking *Principles of Economics* to be published in spite of the facts that: the book was long out of print; the prices of second hand copies had risen steeply; and his publisher repeatedly pled for his consent (Mises 1984, p. 39).

Mises summed up the reasons for this anomalous bent toward scholarly self-abnegation on the part of Menger and Böhm-Bawerk. The early Austrian economists, he reported, believed:

> that while it is the duty of a pioneering mind to do all that his faculties enable him to perform, it is not incumbent upon him to propagandize for his ideas, still less to use questionable methods in order to make his thoughts palatable to people. . . . The main and only concern of the Austrian economists was to contribute to the advancement of economics. They never tried to win the support of anybody by other means than by the convincing power developed in their books and articles. They looked with indifference upon the fact that the universities of the German-speaking countries, even many of the Austrian universities, were hostile to economics as such and still more so to the new economic doctrines of subjectivism. (1984, p. 39)

Unfortunately, Mises himself was ambivalent on the question of whether progress in the discovery of economic truth must proceed helter-skelter in the work of isolated creative thinkers or required a rationally constructed institutional framework. At times he seemed to incline to the Mengerian view, once writing that Menger and Böhm-Bawerk "knew that economists could not be reared. As pioneers and creative thinkers they were fully aware that scientific progress cannot be organized and innovation created, according to plan" (Mises 1978, p. 37). But Mises's attempted defense of his two beloved masters missed the point. Menger and Böhm-Bawerk in effect maintained, in contradiction to their own economic insights as well as to their own behavior as tireless researchers, that progress in uncovering economic truth could not be expedited by the purposeful allocation of scarce concrete means or "economic goods" to the scientific enterprise.

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One of Menger's (1981, pp. 52-53) many brilliant insights involved identifying the prerequisites of an economic good, which included the power to dispose of the thing that satisfies a human need or end. A warm, sunny day at a particular time and place, as desirable as it may be to human beings, is not a good as long as we are unable to control the natural forces whose concatenation produces it. In contrast, the advancement of the understanding of economic laws certainly depends on the existing numbers of economic scientists, research institutes, graduate programs, journals, etc. These are all complementary concrete means for the advancement of economic science and they enhance the productivity of the creative genius as well as the rest of us workaday economists who contribute incrementally to the edifice of praxeological economics. Menger himself would have to admit that he could not have been as productive as he was without disposal over such property as books, journals, writing implements, and paper. But once this much is conceded, it becomes clear that new economic truth does not emanate spontaneously from the intellect of the occasional genius who happens into the field but is attained as the outcome of purposeful activity. *New* economic truth—like romantic love or aesthetic taste—is therefore an economic good, but not an exchangeable good. This means that it is a valuable end to those who pursue it and its discovery or "production" involves the use of scarce resources although the final product cannot be directly bought and sold on the market.[2] Moreover it implies that a reduction in the supply of property committed to its pursuit and propagation, all other things equal, may well lead to scientific stagnation or retrogression and the displacement of economic truth by economic fallacy in the realm of practical affairs. So even if we grant for the moment Menger's argument that the truth will spontaneously triumph in some unspecified long run after all economic errors have finally played themselves out, in the interim, periods of serious scientific retrogression may occur that destroy the economic basis of culture and civilization. We have witnessed such eras in the seven decades of existence of the Soviet Union and in National Socialist Germany of the 1930s. In both cases the property basis of science had been completely engrossed and revolutionized by the state.

This brings us to Böhm-Bawerk (1959, pp. 259-73), whose greatest contribution to economic science is his concept of time preference. According to this concept, human actors, *ceteris paribus*, systematically prefer goods available in the immediate future to the same goods available in the more remote future. This implies that every actor has a finite time horizon beyond which the provision of goods has no value.[3] But since Menger's doctrine does not specify when economic truth will finally vanquish economic ignorance and error, it may well lie beyond everyone's praxeological time horizon. Moreover, even if it does not, its attainment may lie so far in the future, that the value differential between the earlier attainment of truth that results from its purposeful scientific pursuit and its anticipated later spontaneous emergence may be expected to more than repay the substantial expenditure of resources needed to construct an appropriate institutional framework to promote scientific progress.

Menger and Böhm-Bawerk's doctrine that the quest for scientific truth is purely an intellectual exercise that requires no property basis is clearly erroneous and blatantly contradicts their own pioneering contributions to economic theory. Indeed, the

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[2]This is not to deny of course that knowledge of previously discovered economic laws as embodied, e.g., in books, journals, and lectures, can be exchanged on the market. But it does explain why the incomes of pure researchers in any science, but especially in the social sciences, would be so precarious in a free-market economy and consequently why social scientists are so readily enlisted as paid apologists for the continual expansion of the State and its range of activities. On the concept of "nonexchangeable goods," see Rothbard (1993, pp. 183-84) and Wicksteed (1967, 1, pp. 132-33).

[3]On this important implication of time preference, see Mises (1998, pp. 533-34).

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insight of these early Austrians that the achievement of any goal whatever requires disposal over a structure of scarce, complementary goods provides us with a powerful theoretical tool with which to interpret the modern revival of Austrian economics. Thus Austrian economics is brought to bear in explaining its own rebirth.

The Modern Revival of Austrian Economics: The Roles of Property and Genius

The importance of the institutional framework for scientific progress can be illustrated by describing the interaction between property and creative genius in the modern revival of Austrian economics. There are three distinct phases in this revival that roughly coincide with radical differences in the institutional environment.

Phase I: Genius in Bloom–1962-1976

In the quarter of a century leading up to the 1960s Austrian economics as a scientific movement was moribund. The subjective value-based and proto-praxeological approach to economic theory initiated by Menger in 1871 had attracted an increasing number of followers and active researchers from the early 1880s to the outbreak of the First World War. In addition to Böhm-Bawerk, Friedrich von Wieser, Mises, and others in Austria, these included prominent members of the later Frédéric Bastiat-inspired liberal school of economics in France and Italy such as Paul Leroy-Beaulieu, Maurice Block, and Augusto Graziani as well as leading Anglophone economic theorists like J.B. Clark, Frank A. Fetter, Herbert J. Davenport, and Philip Wicksteed. Poised on the cutting edge of neoclassical economic theory on the eve of the war, Austrian economics suffered an amazingly rapid decline, particularly in the U.S. and Great Britain, and was eclipsed by the Marshallian and Walrasian theoretical approaches during the 1920s and 1930s. By the mid-1930s there was no longer an Austrian School to speak of in the sense of a self-conscious, institutionally embedded community of scholars engaged in active research and dialogue within the Mengerian tradition.[4] With the publication of *Nationalökonomie* in 1940, the German-language predecessor of *Human Action*, Ludwig von Mises single-handedly recovered and greatly advanced the distinctive Austrian tradition in pure economic theory.[5] Among several other outstanding achievements, Mises explicitly linked up Mengerian value and price theory with an all-encompassing science of human action that he labeled "praxeology." Unfortunately Mises's great treatise and the praxeological paradigm formulated therein were completely neglected by postwar professional economists and failed to inspire the renewal of the Austrian scientific movement, although *Human Action* laid the foundations for its later rebirth.[6]

During the 1950s, Mises himself continued to work in and elaborate the paradigm, contributing an important methodological treatise, *Theory and History*. There were a few other books that were published by diffuse scholars during the decade that made notable contributions to Austrian theory and method. *Capital and Its Structure* by Ludwig M. Lachmann (1978) demonstrated that the capital structure of

[4]For an account of the rise and fall of the early Austrian School, see Salerno (1999, pp. 35-57). For the influence of Menger on the later French and Italian liberal schools, also see Salerno (2001, pp. 485-86).

[5]On the differences between *Nationalökonomie* and *Human Action*, see Herbener, Hoppe, and Salerno (1998, pp. xv-xvii).

[6]On Mises's other significant advances in Austrian economic theory in *Human Action* and the reasons for the failure of his treatise to have an impact on the mainstream economics profession in the 1950s, see Salerno (1999, pp. 57-61).

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an industrial economy was an intricate latticework of complementary resources that was constantly being reconfigured by entrepreneurs responding to anticipated changes in market prices. Henry Hazlitt's *The Failure of the "New Economics"* (1959) presented a thoroughgoing demolition of the tissue of fallacies that was Keynesian macroeconomics and, in the process, provided an original synthesis of Austrian thinking on a wide range of macroeconomic issues. Finally, Israel Kirzner, Mises's former doctoral student and graduate assistant at New York University, published his dissertation under the title *The Economic Point of View* (1976a), an examination and critique of various views on the definition and scope of economic science leading up to Mises's conception of economics as a branch of praxeology.[7]

Two essays published during the 1950s also merit notice for their substantive contributions to the edifice of Austrian economic theory. In "The Significance of Price Flexibility," originally published as a journal article in 1954, William Hutt explicated the concept of what he called "the dynamic coordinative consequences of price adjustment"—or "price coordination" for short—that was more or less implicit in the Austrian economic tradition from Menger to Mises. Hutt (1975, pp. 130-46) argued that, at any given moment, the structure of actual prices emerging on factor markets was shaped by the competitive bidding of entrepreneurs for inputs in light of their (fallible) individual appraisements of prices on future markets for consumer goods. This entrepreneurial pricing process engendered the actual and continual coordination of realized input prices with expected output prices, which in turn ensured both the full utilization of available resource stocks and their allocation to those uses of greatest *anticipated* monetary value to consumers, i.e., the maximization of the *expected* marginal revenue products of all resources.[8]

The second outstanding essay published during this decade was "Toward a Reconstruction of Utility and Welfare Economics" by Murray Rothbard (1956, pp. 224-62). In this essay, Rothbard finally brought to light and formalized the purely ordinalist, "demonstrated preference" approach to utility analysis inherent in Austrian economics since the early twentieth century. He then utilized the reconstructed Austrian approach to criticize contemporary, mainstream approaches to utility theory, which were nominally ordinalist but variously marred by errors of behaviorism, psychologism, cardinalism, and the assumed constancy of preferences. On the basis of his demonstrated preference approach Rothbard went on to establish that the several variants of modern neoclassical welfare economics were deeply flawed and unscientific because they relied on interpersonal comparisons of utility or harbored implicit value judgments. Rothbard concluded his essay by outlining an original approach to a scientific welfare economics purged of all value judgments and grounded on a rigorously ordinalist concept of utility.

This handful of scattered contributions to Austrian economics forthcoming in the 1950s, however, would have defined the death throes of the school rather than the prelude to its rebirth were it not for the creative genius of Murray Rothbard, which came to fruition in the early 1960s. The revival of Austrian economics as a living scientific movement can be dated from the publication of Rothbard's *Man, Economy, and State* in 1962, a contribution to Austrian economics and to pure economics in general that ranks as one of the most brilliant performances in the history of economic thought. The book was a two-volume treatise of nearly 1,000 pages written in

[7]Despite its many virtues, one drawback in Kirzner's treatment, which will be examined in more detail below, was his exaggeration of the difference between Robbins's—and Menger's—concept of "economizing man" and Mises's concept of "acting man."

[8]For an appreciation and elaboration of the implications of Hutt's concept of price coordination for contemporary Austrian economics, see Salerno (1991, pp. 325-43).

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scintillating English that logically deduced the entire corpus of economic theory step by step from the undeniable fact of purposeful human action. It integrated the insights and theorems of dozens of previous Austrian economists from Menger to Mises into a systematic and comprehensive organon of economic theory. Perhaps the greatest of Rothbard's many contributions in his treatise was the elaboration of a unified theory of production, extending over five of the treatise's 12 chapters and encompassing the capital structure, interest rate determination, factor pricing, and the entrepreneurial role in production. While many elements of the theory had been developed previously by various Austrian economists, they had never been fully integrated and several elements were still missing. Rothbard's methodical treatment of production repaired one of the few serious gaps remaining in Austrian economics after Mises. Rothbard's book also contained critiques of contemporary neoclassical and Keynesian theories and a critical analysis of typical state interventions into the economy. Rothbard followed up this work in 1963 with *America's Great Depression* and *What Has Government Done to Our Money?* (1990). The former book applied the Austrian theory of the business cycle to an analysis of the causes of the Great Depression in the United States and the effects of the government policies implemented to cure it. The book represented an exemplar for future work in applied Austrian economics. The latter work was a slim booklet intended as a primer on Austrian monetary theory, but in it Rothbard originated a praxeologico-historical analysis of the transformation of gold money into fiat money that was an extension of Mises's famous regression theorem.

In 1970, Rothbard published *Power and Market* (1970), an exhaustive typology and analysis, based on value-free economic theory, of the myriad of government interventions into the economy. One of its many innovations was to identify and analyze taxation and government spending as types of intervention into the free market economy rather than, as in the long-entrenched conventional view of economists, the necessary means for creating and enforcing a legal framework for the market economy. The book also contained the first analysis of free market defense agencies from an Austrian perspective as well as a path-breaking *Wertfrei* praxeological critique of anti-market ethics. In 1973, Rothbard published *For a New Liberty* (1985a), a work in libertarian political economy that presented the first argument in defense of a purely anarcho-capitalist society grounded on a natural rights ethic. The book also contained a wealth of detailed argumentation and examples concerning how the free market would provide services hitherto provided by the State. A collection of previously published essays on political economy and social philosophy, *Egalitarianism as a Revolt against Nature* (2000), appeared the following year.

In these works Rothbard not only advanced but reshaped the praxeological paradigm to such an extent that his name became inextricably linked with the greatest thinkers in Austrian economics: mainline Austrian economics from then on was the economics of Menger, Böhm-Bawerk, Mises, and Rothbard. In creating this corpus of work, Rothbard–especially with regard to his work in pure economic theory–could certainly be regarded as a genius working in intellectual isolation. It was not until 1973 that Israel Kirzner published his influential *Competition and Entrepreneurship*, a contribution to pure economic theory that emphasized the entrepreneurial and equilibrating aspects of the market process in an attempted synthesis of Mises's and Hayek's sharply divergent views on the method and content of economic theory.[9] The

[9]In addition to *The Economic Point of View*, Kirzner had published two other books prior to *Competition and Entrepreneurship*, one a textbook (Kirzner 1963) on price theory and the other a monograph (Kirzner 1966) described as a "prologue to capital theory." While containing original ideas that foreshadowed the new perspective on Austrian economic theory formulated in *Competition and Entrepreneurship*, these works had not inspired neophyte Austrian scholars to pursue a new research agenda as his latter work did.

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only other notable book in the Austrian tradition published during this period was *The Myths of Antitrust*[10] in 1972 by the young economist Dominick T. Armentano, which applied Austrian theory to a critique of American antitrust laws. Armentano's theoretical approach to competition and monopoly in the first edition, which was considerably revised in subsequent editions under the influence of Rothbard, was more Schumpeterian than Misesian. Finally, a series of essays and booklets that incisively criticized contemporary monetary theory and policy from the perspective of Austrian monetary economics was contributed by Hans F. Sennholz, an economist who had received his doctorate under Mises in the 1950s.[11] Thus paraphrasing Mises's (1984, p. 10) characterization of Menger, we may say: "Until the early 1970s, there was no modern Austrian School. There was only Murray Rothbard."

Without gainsaying his boundless energy and creative powers however, it must be pointed out that Rothbard was not without institutional means of support, limited though they may have been. From 1952, when he embarked on the writing of *Man, Economy and State*, until 1962, he received grants from and worked for the libertarian Volker Fund. He also received a grant from the Earhart Foundation to write *America's Great Depression* and had worked part-time for the Foundation for Economic Education since the late 1940s. After the dissolution of the Volker Fund in 1962 he obtained a "substantial" grant from the Lilly Endowment to write a general history of the United States.[12]

Rothbard's reconstructed praxeological paradigm took root during the late 1960s and early 1970s, shaping the intellects of dozens of American graduate students and young faculty members, who studied his works alone or in small groups. By the mid-1970s interest in Austrian economics, stimulated by Rothbard's works, had become so extensive that the Institute for Humane Studies (I.H.S.), which had succeeded the defunct Volker Fund as the main institutional promoter of hard-core Austrian economic theory and libertarian political economy, sponsored a conference on Austrian economics at South Royalton, Vermont, which brought together over 30 participants to hear lectures by Rothbard, Kirzner, and the German-born South African economist, Ludwig Lachmann, a former research assistant of Hayek's in the mid-1930s who had written his dissertation at the University of Berlin under the supervision of the German historicist Werner Sombart.[13] A follow-up conference was held the next year in Hartford, Connecticut that featured papers by younger Austrian-oriented faculty members and graduate students with commentaries by senior Austrian economists and fellow travelers, including Rothbard, Kirzner, Henry Hazlitt, William H. Hutt, Hayek, Leland Yeager and Lachmann. The following year, 1976, a third and smaller conference was held at historic Windsor Castle in Scotland, which was to be the last high-level conference focused exclusively on advancing Austrian economics for some time to come.

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[10]The revised and expanded version of Armentano's book was published in 1982 as *Antitrust and Monopoly: Anatomy of a Policy Failure*.

[11]The most important of these essays were "Chicago Monetary Tradition in the Light of Austrian Theory" (1971, 2, pp. 347-66), *Inflation or Gold Standard?* (1973), "No Shortage of Gold" (1975, pp. 41-60). Sennholz later published a valuable book-length treatment of these themes as *Age of Inflation* (1979).

[12]On the sources of financial support for Rothbard's scholarly activities during this period, see Raimondo (2000, pp. 54, 151-53).

[13]For an overview of Sombart's career and the convoluted development of his thinking on economic and political issues, which included infatuations with both Marxian and, later, National Socialism, see Blaug (1986, pp. 236-38) and also Mai (1975, p. 211). Lachmann was not tainted with Sombart's political-economic views, although Sombart's methodological historicism left a lasting mark on Lachmann's thinking that came strongly to the fore in his later works.

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Phase II: Austrian Economics without You Know Who—1977-86

The reason for the abrupt demise of the I.H.S. conference series was that the institutional framework of Austrian economics began to change radically in that year. Without going into detail, the new major funding source for I.H.S. and the Cato Institute, a newly-established libertarian "think tank," made a momentous decision in the late 1970s to deliberately downplay the role of Ludwig von Mises in Austrian economics because his radical intransigence in economic method, theory, and policy risked alienating moderate, neoclassical "free-market" economists, graduate students, and economic policymakers who the new financial-institutional axis was eager to draw into its ambit.

As time went on, Mises's name was mentioned less and less at conferences and symposia sponsored by these financially allied institutions and soon became almost anathema. As Mises was being phased out, there emerged an increasing emphasis on the contributions of Friedrich Hayek, who had won the Nobel Prize in 1974. Hayek, whose postwar views on methodological issues had increasingly paralleled those of the neo-positivist Karl Popper and who was a moderate social democrat willing to accept limited government interventions characteristic of the modern welfare state, was much more palatable to mainstream free-market economists.[14] I.H.S also began to actively promote the work of Lachmann (1977) and co-sponsored, along with the Cato Institute, the publication of a substantial volume of his essays. Thus began the era of what may be called "Austrian Economics without You Know Who," which spanned the decade from 1977 to 1986. This sudden and revolutionary change in strategic vision by those who controlled the property basis of the emerging institutional infrastructure of modern Austrian economics happened to coincide with and intensify the growing rifts within the intellectual movement.

Incipient factionalism within Austrian economics was already apparent at the South Royalton conference in 1974. If one reads the papers presented at that conference and collected in the book, *The Foundations of Modern Austrian Economics*, it is clear that Rothbard, Kirzner, and Lachmann disagreed on a number of fundamental points of economic theory and method.[15] Rothbard (1976a, pp. 19-39; 1976b, pp.

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[14]For Hayek's description of how and when he came to accept the "Popperian philosophy," see Hayek (1994, pp. 49-51). Hayek's main essays elaborating his quasi-Popperian approach to the social sciences are found in Hayek (1969b, pp. 3-21; 1969c, pp. 22-42). This collection of essays was dedicated to Karl Popper. Hayek's concessions to social democracy and the welfare state appear in (Hayek 1960, part 3). In an otherwise favorable review of this book, Mises (1990a, p. 151) found "the third part of Professor Hayek's book . . . rather disappointing" for suggesting that the welfare state is compatible with liberty under certain conditions. Hoppe (1994a, pp. 67-93) argues that Hayek's view on the role of the market and the state is virtually indistinguishable from that of a modern social democrat.

[15]It should be noted that the date of the revival of Austrian economics depends on one's view of the degree of homogeneity of the earlier Austrian tradition that culminated in Mises and Hayek. This is a matter of intense controversy that has spawned a voluminous and growing literature. Those who identify themselves more closely with the views of Kirzner or Lachmann as described below in the text tend to deny the existence or importance of differences between Mises and Hayek and are inclined to mark the revival with the awarding of the Nobel Prize to Hayek in 1974. In contrast, those who perceive two divergent branches of Austrian economics that can be traced back through Mises and Hayek to their respective mentors, Böhm-Bawerk and Wieser, tend to agree with the present writer that the Austrian rebirth can be dated to the publication of Rothbard's *Man, Economy, and State* in 1962. In the latter view, deep-seated theoretical disagreements divide the contemporary Austrian movement into broadly Misesian and Hayekian factions, disagreements that began to surface more than a decade after the publication of *Man, Economy, and State*, when the Austrian revival was already in full swing. The controversy began in 1990 with the attempt by the present author to "dehomogenize" Mises's and

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52-74; 1976c, pp. 89-111; 1976d, pp. 160-84) contributed four papers, on methodology, the role of value judgments in economic science, the Scholastic precursors of Austrian economics, and Austrian monetary theory. These were rooted squarely in the praxeological paradigm originated by Menger and Böhm-Bawerk and first comprehensively formulated by Mises.

Lachmann in his contributions presented a nihilist position, arguing that because knowledge is unpredictably and continually changing, the everyday prices that we observe and pay and that entrepreneurs anticipate to buy and sell at in the future are meaningless for economic calculation, and therefore economic science cannot say anything definite about the rationality or optimality of resource allocation in the free market. Moreover, Lachmann (1976, pp. 126-32) contended, because the market process is ruled by autonomous and mercurial expectations, which are detached from human purpose, judgment, and property, the free market is incapable of systematically weeding out inferior entrepreneurs over time. Both of these positions plainly contradicted Mises's conception of the function of prices, entrepreneurship and the market process. Lachmann (p. 145) also outrageously smeared Böhm-Bawerk, Mises's revered teacher and the most innovative capital theorist in the history of economic thought as someone "who never meant to be a capital theorist. He was essentially a Ricardian."[16]

In one of his contributions, Israel Kirzner (1976b, pp. 115-25) emphasized the distinction he had drawn in his earlier works between what he called the "Robbinsian" economizer or maximizer, who purposively allocates his scarce resources to those ends that he expects to yield him greatest satisfaction, and the Misesian actor who is ever alert to and seeking for new ends to pursue and means to achieve them.[17] However, nowhere in Mises's *Human Action* or his other works is action defined in terms of perpetual seeking after the discovery of new opportunities. For Mises, who like Robbins based his concept of choice on Menger's "economizing man," action always involved a selection of the most valuable of the ends known to the actor at the moment of choice and attainable by the limited means known or expected to be at hand. Indeed, the subtitle of the German-language forerunner of Mises's treatise on *Human Action* translates into English as "The Theory of Action and Economizing," which plainly suggests the roots of Mises's concept of action in the Mengerian economizing man.[18] Where Mises went beyond Menger and Robbins was to explicitly demonstrate that the very concepts of scarcity and choice constitute the universal condition of all rational beings who consciously and purposively strive to attain goals.

Hayek's views on the socialist calculation debate and has progressively broadened to include such issues as: the role of calculation versus the role of knowledge in Austrian price theory; the timing and causes of the decline of the early Austrian School; and, most recently, whether there existed a general equilibrium tradition in Austrian economics that included Wieser, Schumpeter, Hayek, and most of the Austrian economists of Hayek's generation. For contributions on both sides of these issues, see: Kirzner (1988, pp. 1-18; 1996, pp. 143-54; 1997, pp. 79-80); Salerno (1990a, pp. 26-54; 1990b, pp. 51-71; 1993, pp. 113-46; 1994, pp. 111-25; 1999; 2002); Rothbard (1991, pp. 51-76); Yeager (1994, pp. 93-109); Hoppe (1996b, pp. 143-49); Herbener (1996, pp. 151-62); Hülsmann (1997, pp. 23-48); Reynolds (1998, pp. 29-43); Boettke (1998, pp. 131-58); Horwitz (1998, pp. 427-50); and Caldwell (2002, pp. 47-66).

[16]Lachmann's statement sharply conflicts with the respect he expressed in an earlier work for "the intuitive genius of Boehm-Bawerk" as a capital theorist and as one who "saw more clearly" than any other economist "the essential heterogeneity of all capital" (Lachmann, 1978, p. 73).

[17]Kirzner had introduced this distinction in *The Economic Point of View* (1976a, pp. 108-85), and deployed it as the basis for his distinctive view of the market as an entrepreneurial discovery process in *Competition and Entrepreneurship* (1973).

[18]I am indebted to Guido Hülsmann for translating the subtitle and for alerting me to its relevance for my point.

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In the same essay, Kirzner dismissed the explanation of price determination in terms of Marshallian supply and demand curves as presupposing perfect information and therefore inadequate for explaining the formation of actual market prices. However, Kirzner failed to note that supply-and-demand analysis as developed by Böhm-Bawerk, Wicksteed, Mises, and Rothbard did not rely on the assumption of perfect knowledge and foresight and was perfectly adequate for explaining the dynamic pricing process on real markets.[19] Mises provided a concise statement that perfectly expresses the essence of the realist, Mengerian approach to supply and demand that incorporates speculative actions and errors:

> Prices come into existence by the eagerness of people to exchange one commodity or service against another commodity or service. They are the outcome of various individuals' readiness to buy or to sell. Every price is the outgrowth of a definite constellation of demand and supply. No price could ever be different from what it really was, because people failed to appear on the market at that time who were ready to bid a higher price, or who were ready to ask a lower price. The structure of prices reflects the state of the material conditions determining people's existence and the success of the endeavors made to satisfy the most urgent needs, as far as these material conditions make it feasible. (Mises 1990b, p. 140)

The volume of collected papers from the 1976 Windsor Castle conference revealed a further sharpening and hardening of the fundamental approaches and concerns dividing the Lachmannians, Kirznerians, and Rothbardians. The latter focused on advancing specific aspects of mainline Austrian economic theory, with especial emphasis on macroeconomic issues.[20] The contributions of the Kirznerians and Lachmannians, for the most part, were absorbed in broader methodological issues and critiques of the neoclassical mainstream and of each other with a conspicuous avoidance of the macroeconomic topics of money and business cycles.

With the subtle shift of institutional support toward the Kirznerian and Lachmannian variants of Austrian economics just getting under way in 1977, Rothbard perceptively noted the effect on younger Austrians almost immediately and began to sound a clarion call to all and sundry for a return to the mainline Misesian tradition. In a letter to me in 1977 properly rejecting a paper I had submitted to the *Journal of Libertarian Studies* for being pervaded with "Lachmannia," he concluded:

> I sound off at you on Lachmann because I've been appalled, since reading some of the papers written by the [summer] fellows out here [at the Institute for Humane Studies in Menlo Park, California] at the extent to which Lachmannia has permeated their thinking. I am convinced that Mises would have considered Lachmann (an institutionalist, nihilist, and Keynesian) an "anti-economist," and he would have been right. Lachmann is not an Austrian at all. Back to Mises! (Rothbard 1977)

By 1978, the headlong retreat from Mises and the praxeological paradigm had begun in earnest and the split in Austrian economics was discussed openly by all sides. For example, the late Don Lavoie wrote a review of the monthly Austrian

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[19]See, for example, Wicksteed (1967, 1, pp. 212-36; 2, pp. 493-517) and Rothbard (1998, pp. 91-140).

[20]See especially: Armentano (1978, pp. 94-110); Rothbard (1978, pp. 143-56); and Garrison (1978, pp. 167-204). All three of these essays have gone on to become classics of the Austrian revival. Another noteworthy chapter in the book that reflects a strong Rothbardian influence is Rizzo (1978, pp. 40-56).

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Economics Seminar held at New York University for *The Austrian Economics Newsletter* published in Fall 1978. This issue of the newsletter also happened to feature an interview with Lachmann. In his review, Lavoie forthrightly identified "two contrasting intellectual tendencies among Austrians: 'nihilism' and 'Ricardianism'." He went on to declare, "the modern Austrian school can be usefully analyzed with the theoretical tool of this 'nihilist-Ricardian' spectrum" (Lavoie 1978, p. 5).[21] The "nihilists" comprised Lachmann and the British economist George Shackle who was Lachmann's fellow Hayek research assistant at the London School of Economics in the mid-1930s.[22] "Ricardian" was the derisive term picked up from Lachmann's characterization of Böhm-Bawerk by his younger followers and referred to Rothbard and his followers, as well as to Kirzner, because of his emphasis on the equilibrating tendency imparted to the market process by entrepreneurial activities.

Shackle himself, who became an early guru to the nihilist wing, admitted in an interview with *The Austrian Economics Newsletter* that his approach to economics involved "a very nihilistic position and I realize that." He also declared in the same interview: "I've been saying for almost forty years that economics isn't a science, and we ought not to call it a science." When asked by the interviewer what sort of advice he believed that an economist could prudently give to policymakers to improve economic welfare for society, he responded: "My idea of welfare economics is that you choose an administrator, a man with a conscience himself, and broad sympathy, with a generous mind and then you say, 'Leave it to him!' I don't believe you can do any better" (Shackle 1983, p. 7). In other words the intuition of a benevolent dictator or economic czar is more apt to identify the processes needed to secure economic efficiency and prosperity than the systematic reasoning of economic science.

By the late 1970s, with Rothbard increasingly deprived of an institutional base, the Rothbardian revival of Austrian economics that was just beginning to ripen in the early 1970s was in serious jeopardy of withering away. Meanwhile the resources needed to construct an institutional framework for the two alternative branches of contemporary Austrian economics were gushing forth. A well-funded Austrian Ph.D. program was in place at New York University where Kirzner occupied a tenured faculty position, Lachmann held an annual one semester appointment as a Visiting Professor, and two additional, young Austrians were hired on as full-time faculty members in 1978. The prospects for the Rothbardian revival darkened considerably when in 1980, a lavishly financed Ph.D. program in anti-Misesian, pro-Lachmannian "Market Process" economics was instituted at George Mason University in northern Virginia.[24]

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[21]Lavoie later emerged as the leader of the nihilist faction when it attempted to engraft the hermeneutical method onto Austrian economics in the mid-1980s.

[22]Shackle's work that exercised the greatest influence on the Austrian nihilists was *Epistemics and Economics: A Critique of Economic Doctrines* (1972).

[23]The two young NYU Austrian faculty members were Mario J. Rizzo, a productive Hayekian scholar who specialized in the discipline of law and economics, and Gerald P. O'Driscoll, Jr. (1977) a rising star in Austrian macroeconomics who had just published a book on Hayek's contributions to monetary and business cycle theory. The two later collaborated on a book entitled *The Economics of Time and Ignorance*, which, as the title suggests, dealt extensively with Lachmannian and Hayekian themes and significantly influenced the generation of young Austrian scholars who had entered the NYU and GMU graduate economics programs in the early 1980s (O'Driscoll and Rizzo 1985). For a critical review of the book from a Misesian perspective, see Baird (1987, pp. 189-206).

[24]This program has since been transformed into a *bona fide* Austrian economics program congenial to Misesian economics, largely through the efforts of Peter Boettke.

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Rothbard's break with Cato Institute in early 1981, left him once more intellectually isolated and institutionally homeless, but neither his spirits nor his scholarly productivity ever waned. In fact, every setback only steeled his determination to complete the revival of Misesian economics and reconstruct the institutional framework necessary for its permanent flourishing. Throughout the early 1980s, Rothbard continued to advance the Austrian paradigm in the areas of monetary analysis, applied economics, and political economy, publishing several classic essays, including: "The Myth of Neutral Taxation" (1981); "Law, Property Rights, and Air Pollution (1982a); "The Federal Reserve as a Cartelization Device" (1984, pp. 89-136); and "The Case for a Genuine Gold Dollar" (1985b). During this period he also published two books, *The Ethics of Liberty* (1982b) and *The Mystery of Banking* (1983). The former volume was a landmark in the history of social philosophy as the first work to provide the anarcho-capitalist variant of libertarian political economy with an ethical foundation in natural rights theory. In the process Rothbard demonstrated that the right to property–in one's person and appropriable goods–is the fundamental unifying concept of both normative political philosophy and value-free economic science.

The Mystery of Banking was a theory and history of money and banking written from an Austrian perspective and, as its title suggests, accessible to the non-specialist in economics. Nonetheless it contained an important extension of Austrian monetary theory. Specifically, Rothbard integrated a detailed exposition of the multiple bank credit expansion process into Austrian monetary theory. This task had never been undertaken before by Mises or by Rothbard in his treatment of money in earlier works and constituted a lacuna in the Austrian explication of the money supply process. The arcane process by which a fractional reserve banking system operates to multiply demand deposits was first systematically expounded by the Austrian-oriented American economist, C.A. Phillips in 1920.[24] In addition to this expository contribution, Rothbard corrected an erroneous deviation from Phillips's path-breaking analysis that began to crop up after World War II and especially after the publication of Milton Friedman's and Anna Schwartz's influential *Monetary History of the United States* in 1963. Whereas Phillips had derived a simple but versatile "reserve" multiplier capable of distinguishing between the influences of central bank policy, commercial bank operations, and the actions of the non-bank public on the money stock, modern money and banking textbooks following Friedman and Schwartz (1963, pp. 50-51) operated with a seemingly more sophisticated formula, the "high powered money" or "monetary base" multiplier, which conflates these separate influences. In rectifying this technical error and rescuing Phillips's original analysis from oblivion, Rothbard restored the proper analytical framework for interpreting historical boom-bust episodes such as the Great Depression.[25]

In 1977, Rothbard also became the founding editor of *The Journal of Libertarian* Studies, an interdisciplinary journal that served as an outlet for occasional articles on applied economics and economic policy from an Austrian perspective, and he continued to edit it throughout this period.

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[24]Phillips went on to co-author a monograph in 1937 on the Great Depression in the U.S. that employed his analysis of the deposit multiplier process combined with the Austrian theory of the business cycle as an interpretive framework and concluded that the primary cause of the depression was the bank credit expansion orchestrated by the Fed in the 1920s (Phillips, McManus, and Nelson, 1972). Also of doctrinal interest is the fact that Herbert Davenport (1968, pp. 260-63, 286-87), another American economist strongly influenced by the early Austrians, had briefly outlined the deposit multiplier process in 1913.

[25]In his review, Lawrence White surprisingly failed to mention Rothbard's expository and technical achievements in the book.

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Despite Rothbard's continued productivity during his time in institutional exile, the thoroughgoing revolution in the property infrastructure of Austrian economics now forestalled the products of his creative genius from reaching and molding the young minds of a new generation of graduate students. Shackle-Lachmann nihilism or Kirzner's "discovery" approach to the market process were the new paradigms that young Austrian scholars were now immersed in.

Phase III: The Quarterly Journal of Austrian Economics *and the Return of Ludwig von Mises—1987-Present*

Rothbard clearly recognized that the rapid spread of the Lachmannian strand of nihilism and the calculated apotheosizing of the methodologically tolerant Hayek and shunting aside of the allegedly "dogmatic" Mises, which was fostered by the new institutional arrangements, was leading to decay and retrogression in modern Austrian economic thought. Fortunately, contrary to the position maintained by Menger and Böhm-Bawerk, Rothbard believed that intellectual error must not be permitted to run its course without challenge. He further understood that combating these particular errors and restoring the Misesian praxeological paradigm as the core of Austrian economics required a structure of complementary institutional means. Thus was born the idea of a journal devoted exclusively to advancing Austrian economics. But the idea was not originally Rothbard's, it was Llewellyn H. Rockwell's.

When Rockwell founded the Ludwig von Mises Institute in 1982, he had singlehandedly laid the institutional foundations for the restoration of sound Austrian economics—Austrian economics unabashedly inspired by the scientific vision of Ludwig von Mises. The Mises Institute was indispensable for rescuing the modern Austrian movement that had been initiated by Rothbard in 1962 and by the early 1980s was manifestly foundering. When Rockwell suggested the idea of an Austrian journal as an integral component of this institutional rescue effort, Rothbard immediately saw merit in the idea and seized upon the journal as the main instrument for reclaiming Austrian economics from those who had stripped it of its essential Misesian content in search of acceptance by mainstream economists. Hence Rothbard pushed for a distinctive and bold name for the journal that would proudly and explicitly proclaim Austrian economics as an alternative to the prevailing neoclassical-Keynesian synthesis. He was opposed in this by a number of younger Austrians who argued for a less provocative and more nondescript name like the *Journal of Market Process.* But Rothbard perceptively recognized this concession on the journal title as a cover for and first step toward watering down the praxeological core of Austrian economics. Rothbard responded to his critics:

> But it seems to me that one of the glories of such a journal is precisely to be out-front, to raise high the banner of Austrianism and to mark it as a distinct school, which of course it is. Otherwise, though in the short-run it might be more comfortable for some of our associates or contributors to be associated with a neutral-type name, in the long-run (or even not so long) the whole enterprise loses its point. . . . The quarrel over the journal name is only a symptom. . . . The problem is this: a lot of younger Austrians . . . have given up basic Misesian praxeology, that is: that Austrian theory is deduced from a few general axioms implicit in the existence of human action, and that therefore the economic method is fundamentally different from the methods of the physical sciences . . . . Many Austrians . . . are anti-praxeological, and hence anti-Misesian, and they are trying to preserve fashionable methodological unity of the sciences . . . by being mainstreamers who simply talk about "disequilibrium," time, and "market process." . . . The key is praxeology and these people have given it up. . . . So I think that lurking behind the alleged tactical differences on

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> the title of a journal rests a much deeper problem: the abandonment of Austrianism itself. (Rothbard 1982c,d)

Thus the name of the journal became *The Review of Austrian Economics* and it was initially boycotted by a number of prominent younger Austrians who refused to serve on its editorial board or to contribute articles to it. Nonetheless, it thrived and has gone from an annual to a quarterly publication under the new title of *The Quarterly Journal of Austrian Economics.*[26]

In 1982, Rothbard closed his remarks on the controversy over the journal's name with the following statement: "At any rate, we have a tough row to hoe in Austrianism in general to rescue it from: Lachmann-Shackle nihilism; Stanford probababble; . . . modern philosophy; and fuzzy Hayekianism. All this makes a hard-core institute all the more necessary" (Rothbard 1982d). Lew Rockwell gave us the hard-core institute; Murray Rothbard gave us the hard-core journal. With these institutional means at our disposal we have achieved our goal of putting the modern Austrian revival back on track and restoring the names of Mises and Rothbard as the modern masters in the scientific pursuit of economic truth.

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[26] *The Review of Austrian Economics* is now the name of another, newer journal that began publication in 1999 under the editorship of Peter J. Boettke. According to the introductory editorial of the new *RAE*, the Austrian contribution to intellectual history "was to combine the interest-driven logic of economic analysis with a classical sociological emphasis on social institutions. . . . This is still the Austrian program." The mission of this journal is, therefore, to fill the "intellectual market niche" in contemporary economics that is "defined by the unsolved problems and the unanswered questions inside the 'black boxes' of human desires and beliefs, of expectations and imperfect foresight, of novelty and change, and of history and institutions" (Boettke 1999, pp. 3-4). The mission of the new *RAE* is thus more diffuse than that of the Rothbard-inspired *QJAE*, which is to advance and disseminate the praxeological paradigm to the point where it is widely perceived as a viable replacement for the rapidly degenerating and increasingly vapid positivist paradigm in economics. The identification of the difference in their respective missions is not to suggest that the two journals are not complementary elements in the broader Austrian movement. In fact, an increasing number of Austrian scholars regularly publish in both journals, as well as in the *Journal des Economistes et Etudes Humaines* (which accepts English-language articles) and the more policy-oriented *Independent Journal of Political Economy.*

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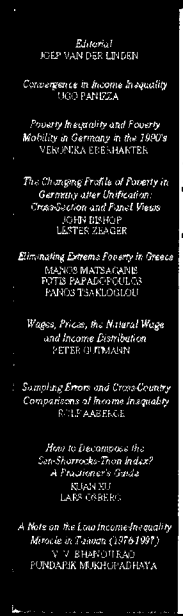
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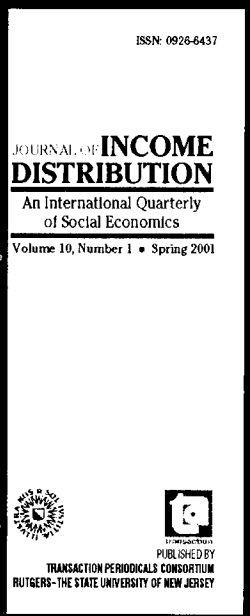
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